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Fig. I.

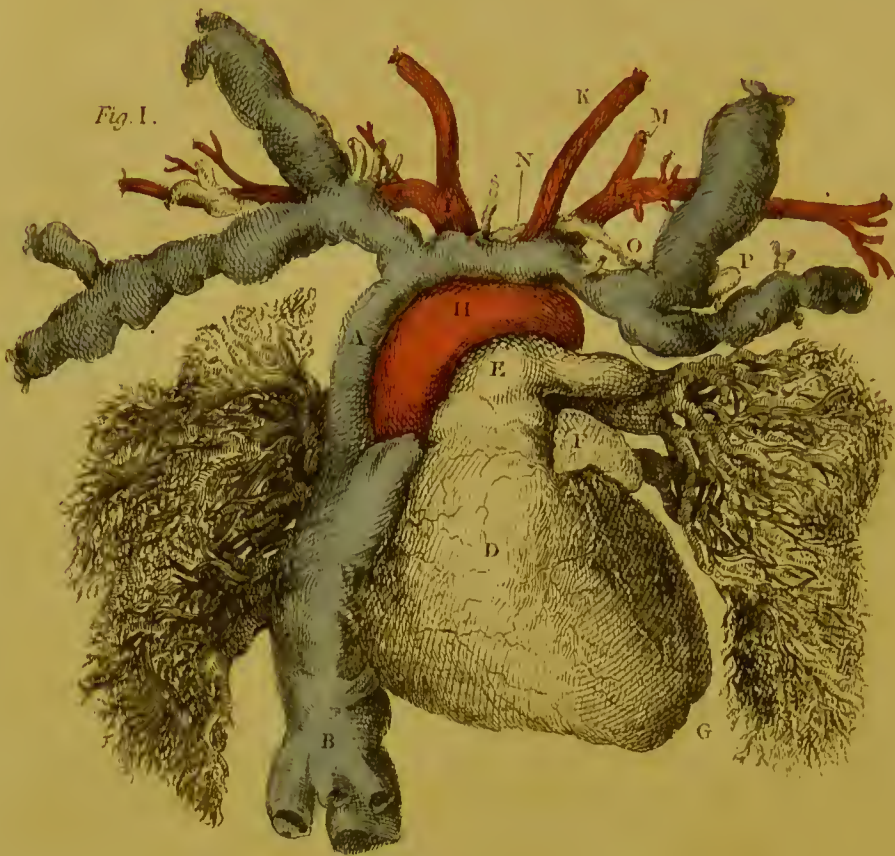
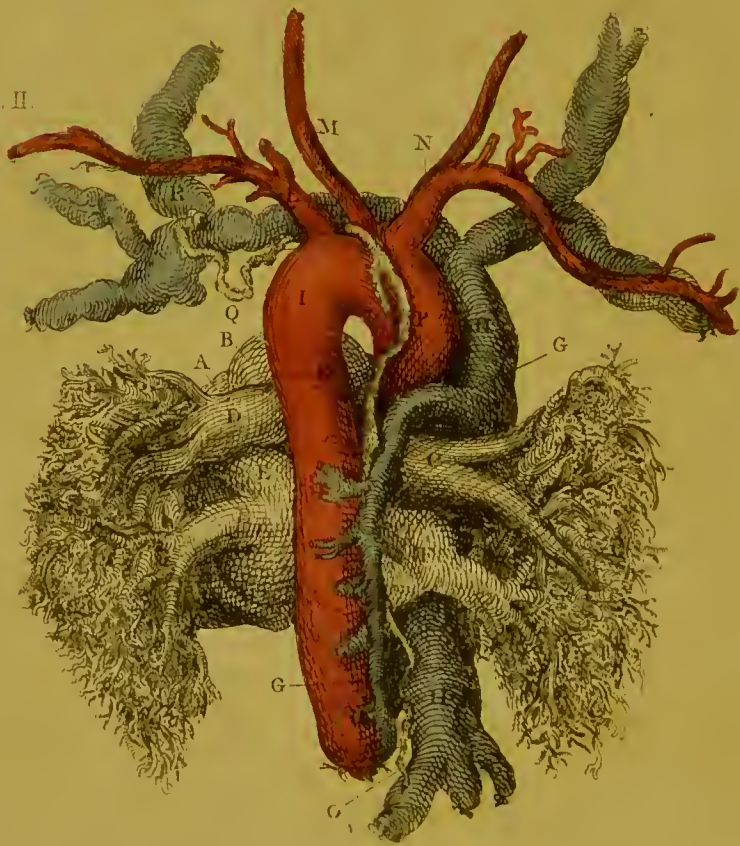


Fig. II.

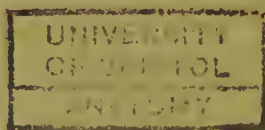


ENGRAVINGS
OF THE
ARTERIES ;
ILLUSTRATING
THE SECOND VOLUME
OF THE
ANATOMY OF THE HUMAN BODY,
AND SERVING AS
AN INTRODUCTION
TO THE
SURGERY OF THE ARTERIES.

BY CHARLES BELL,
PROFESSOR OF ANATOMY AND SURGERY TO THE ROYAL COLLEGE OF SURGEONS,
LECTURER IN THE SCHOOL ESTABLISHED BY DR. HUNTER,
SURGEON OF THE MIDDLESEX-HOSPITAL,
FELLOW OF THE COLLEGE OF SURGEONS OF EDINBURGH,
AND MEMBER OF THE COLLEGE OF LONDON.

THE FOURTH EDITION.

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LONDON:
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New-Street-Square.

THEATRE OF ANATOMY,
GREAT WINDMILL-STREET.

THE
Plan of Lectures

ON
ANATOMY, PHYSIOLOGY, PATHOLOGY, AND SURGERY,

BY
Mr. CHARLES BELL, Surgeon to the Middlesex-Hospital ;
And Mr. SHAW.

TWO Courses of Lectures are given during the Winter and Spring Seasons : one Course beginning on the 1st Day of *October*, and terminating on the 18th Day of *January* ; the other Course beginning on the 19th Day of *January*, and terminating early in *May*.

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II. The Diseases which require Surgical Operations. — III. The Operations performed on the dead Body.

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PREFACE

TO

THE FIRST EDITION.

To facilitate the acquisition of knowledge ought to be the first object of an elementary book ; and for this purpose we ought to study simplicity. When the way is smoothed, the student feels his progress, and is pleased with his own exertions : perhaps in Anatomy, more than in any other pursuit, it is necessary to make the student sensible of his progress, before he can feel any thing like enthusiasm, or partiality for it.

It is upon the simplicity of these Plates, therefore, more than upon their elegance, or their accuracy, (though I am confident that in this last respect they are not deficient,) that I would place their merit. When the importance of the study of

the Arteries is considered, — a point so fully enforced and illustrated in the volume of the text to which I mean these plates to be attached, — this book must, I think, be an acquisition to the student, since I am conscious that I should myself have found it to be so in the commencement of my studies. I am assured, also, that the study of the Blood-vessels and Nerves from Plates, prepares us better for undertaking any surgical operation than description, however accurate or simple. It is upon the eye that the impression must be made, which is to enable us, in looking upon a limb, to mark the course of the Arteries: Drawings are a kind of notes, too, more easily consulted; and bring to the mind, in a more lively manner, all that was associated in our first studies.



IN following the course of the Arteries, we have continual occasion to observe, that if one branch deviate from the more general course, or be of an unusual size, the neighbouring branches have also an unusual form. In the arteries of the arm, for example, were we to observe the great Thoracic Artery of an uncommon size, and sending large branches under the Latissimus Dorsi, and under the Scapula: were we to take our drawings of this Artery as an example of a beau-

tiful distribution of the external Mammary Artery, without attending to the effect of such distribution on the Subscapular Artery: or again, were we to draw the Subscapular Artery as large as we sometimes find it, we should not give a just representation of the natural and most usual distribution of the neighbouring arteries. As we find that the distribution of the Thoracic Arteries materially affects the size and distribution of the Articular Arteries and of the Profunda, although it be necessary in the text to describe the size and importance of this Artery, because in our operations at this part we must keep in view the more dangerous and unfavourable circumstances, it does not follow that we are to make our drawings by the same rule. By proceeding on this principle we should make all the branches monstrous and unnatural.

We thus see the necessity of combining drawing with description. In the latter we mark all the varieties of distribution, and the peculiarities of each branch considered individually; but this again naturally produces intricacy, unless, by comparison with the drawings, and their short explanations, we can take a rapid and general view of the course of the vessels. The drawings ought, therefore, to give the representation of the more general distribution, while the varieties and peculiar forms are left to description; and here comes a question of some consequence — How is a selec-

tion from the great variety of distribution of the vessels and nerves of the body to be made?

I cannot agree with the opinions most prevalent regarding Anatomical Tables, that it is impossible to make a true representation of the parts from any individual body; for, as we see, in looking over the variety of Anatomical Tables, that those, which have the characters of the parts distinctly marked, and have been evidently drawn from the parts dissected and laid out before the artist, are in greatest esteem for the accuracy of the anatomy, and best bear the only true test of excellence, the immediate comparison with the subject in the dissecting room; so, on the other hand, those made by first drawing the outlines of the parts, and then the vessels, are plans merely, in which the character of the parts, and the peculiar course and turnings of the vessels, are lost. Indeed I suspect that it has been from a want of knowledge of drawing, that the system of composing plans of the anatomy, instead of making accurate drawings, has obtained so generally.

But I hope I shall not be understood to say, that if a drawing be made accurately from the subject, it will therefore answer all the purposes required. Of twenty bodies, not one, perhaps, will be found fit for drawing. And I conceive that we are not to work out a drawing by piecing and adding from notes and preparations; but we are to select carefully from a variety of bodies, that which gives

largeness of parts, where the characters of parts are well marked, and where there is the most natural and usual distribution of vessels. In making our drawings of such dissections, let us allow ourselves no licence, but copy accurately. By noting in the description any little deviation, every necessary end is answered.

I hope that I have been able to make these Plates simple, intelligible, and accurate. While the design of this book of Plates is to present to the student, at one glance, the general distribution of the vessels, and to fix them in his memory in a way which no description can accomplish, it will be found to give the most usual distribution of the branches; for I have been careful in the selection of my subjects.

In studying the Arteries, or any part of Anatomy, we should, in the first place, run the eye over the corresponding plate, then read the general description in the text, and, lastly, proceed to study more closely, step by step.



NOTE
TO
THE FOURTH EDITION.

IN this Edition I have added, in foot-notes, some schemes of arrangement of the more intricate branches.

The most essential addition, however, which has been made, is the introduction of some rules for cutting down upon the Arteries, in cases of dangerous bleedings. They were taken by a pupil, from my public lectures on the Arteries, while I had the body before me, and was describing and measuring the depth of parts, previous to entering upon the rules deducible from the projecting points of bone, and the course of the tendons and muscles in the living body.

The mere note of cases of dreadful wounds, to which the Arteries are liable, must give more interest to this subject, while the references will enable the student to pursue it further.

LONDON, }
34. *Soho-Square*. }



EXPLANATION

OF

PLATE I.

FRONT AND BACK VIEWS OF THE HEART.

FIG. I.

A View of the Heart, nearly in the Situation in which it is seen when the Breast is opened.

- A. **T**HE SUPERIOR VENA CAVA, returning the blood from the head and arms.
- B. The INFERIOR CAVA, where it pierces the diaphragm to convey the blood from the lower parts of the body into the right auricle. The three vessels which join the Cava here are the *Venæ Cavæ Hepaticæ*.
- C. The RIGHT SINUS, or AURICLE.
- D. The RIGHT VENTRICLE.

B

- E. The PULMONARY ARTERY; it is seen to divide; one branch to pass under the arch of the aorta, to the lungs of the right side; the other to take an acute turn to those of the left side.
- F. Part of the Left Sinus of the heart, or that which is properly the auricle.
- G. The LEFT VENTRICLE; it is seen Fig. II. A.
- H. The Arch of the AORTA.*
- I. The Arteria Innominata giving off the SUBCLAVIAN and CAROTID of the right side.
- K. The CAROTID ARTERY of the left side.
- L. The SUBCLAVIAN ARTERY of the left side.
- M. The VERTEBRAL ARTERY of the same side.
- N. The THORACIC DUCT where it lies near the arch of the Aorta, and behind the root of the great arteries.
- O. The THORACIC DUCT where it passes across the root of the neck.
- P. The Termination of the THORACIC DUCT in the union of the Subclavian and Jugular Veins.

FIG. II.

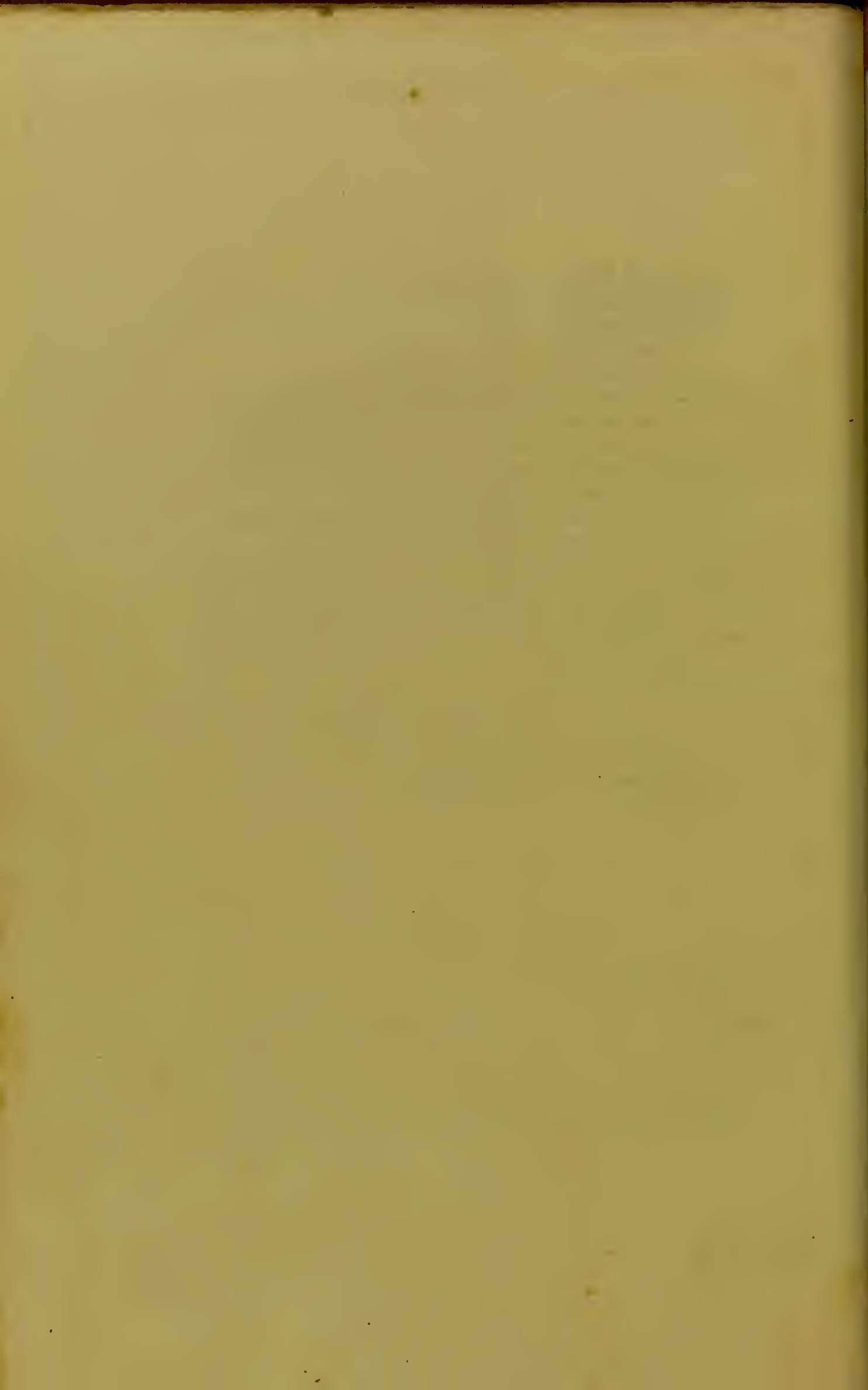
Back View of the Heart and Vessels.

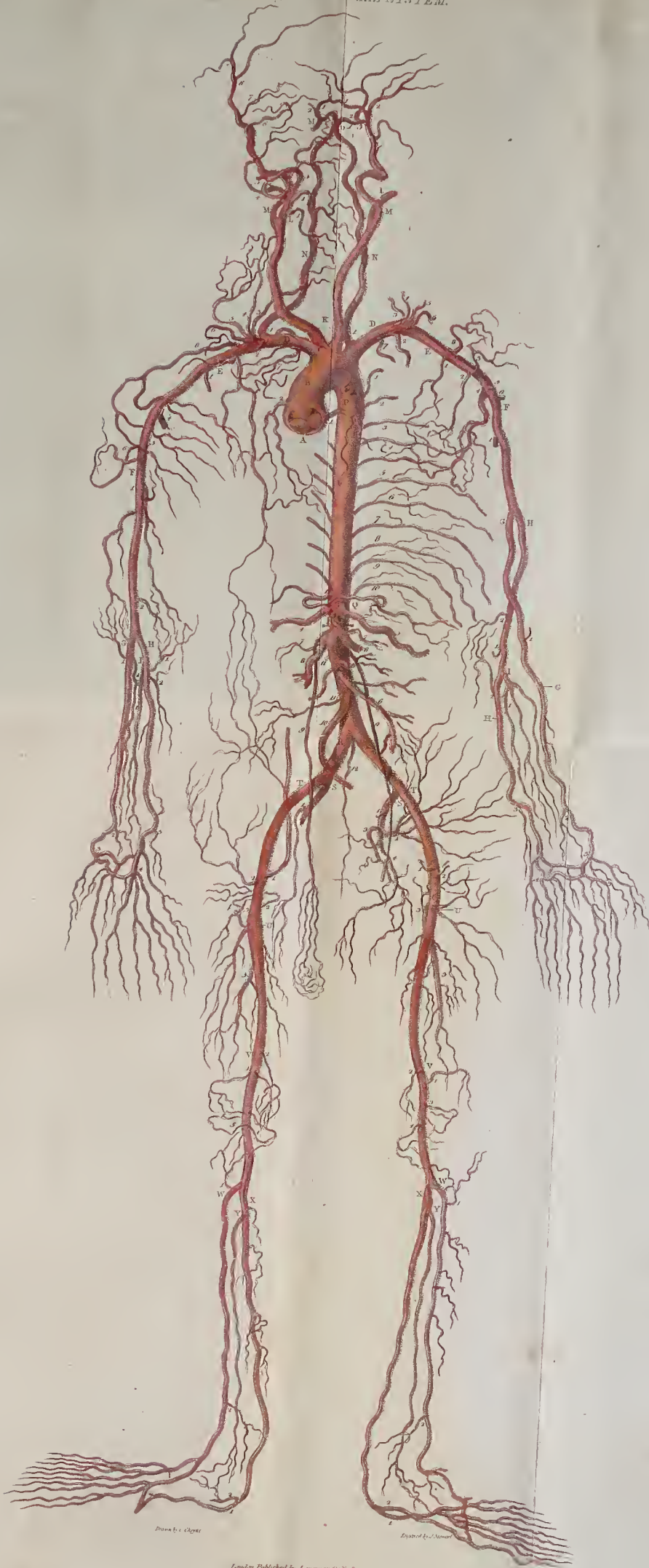
- A. The LEFT VENTRICLE of the Heart.
- B. The Trunk of the PULMONARY ARTERY.

* *Arch of the Aorta.* — As this curve of the great artery receives the full impetus of the blood sent out of the artery, it is the part most frequently found *aneurismal*. It is so often found a little enlarged that this probably is the reason of its being called the *great sinus*. The *lesser sinuses* are well expressed in the succeeding plate, being the convexities behind the semilunar valves of the Aorta.

The Sinus of the Aorta wounded by a man's falling on a spike; instant death was the consequence, the pericardium being found stuffed with blood, which stopped the heart's action. — See *Catalogue of my Museum in Windmill-Street*.

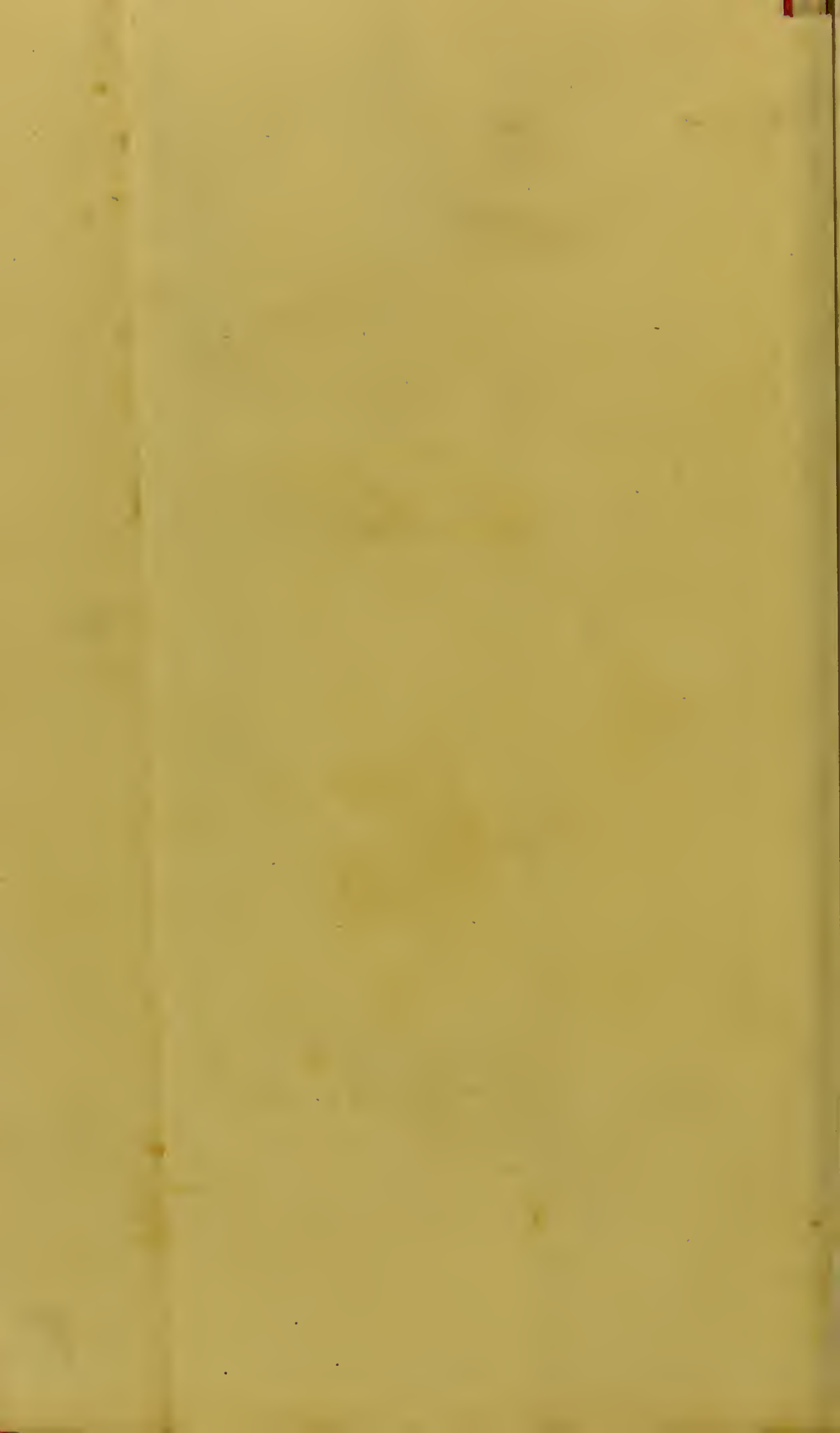
- c. The Right Branch of the Pulmonary Artery.
- d. The Left Branch of the Pulmonary Artery.
- e. e. The Pulmonary Veins of the left side, entering the left sinus of the heart.
- f. The Pulmonary Veins of the right side.
- g. g. The VENA SINE PARI, or AZYGOS; this vein lies upon the spine, collects the blood from the back part of the thorax, and conveys it to the superior vena cava.
- h. The SUPERIOR and INFERIOR VENÆ CAVÆ.
- i. The Aorta, where it first touches the spine.
- k. One of the Bronchial Arteries, going to supply the lungs.
- l. The LEFT SUBCLAVIAN ARTERY.
- m. The LEFT CAROTID ARTERY.
- n. The ARTERIA INNOMINATA, or common origin of the subclavian and carotid arteries of the right side.
- o. The THORACIC DUCT, where it lies upon the spine and near the AORTA.
- p. The THORACIC DUCT, where it has ascended.
- q. The same duct, now the principal trunk of the absorvent system, where it lies betwixt the root of the arteries to the head and arms and the branch of the Superior Cava.
- r. The trunk of the Absorbents entering the left Subclavian Vein.





Drawn by C. Wright

Engraved by J. Smith



EXPLANATION
OF THE
PLATE OF THE AORTIC SYSTEM.

PLATE II.

*Principal Divisions of the
Arteries.*

Branches of the Arteries.

A. VALVES of the AORTA.

B. The ASCENDING AORTA { 1. The Left Coronary Artery.
2. The Right Coronary Artery.

C. The ARTERIA INNOMINATA.

D. D. The SUBCLAVIAN ARTERY	{	1. The Vertebral Artery. 2. The Internal Mammary. 3. The lower Thyroid Artery. 4. The ascendant Branch of the Thyroid. 5. The Transversalis Colli. 6. The Transversalis Humeri. 7. The first and second Intercos- tals. 8. The Suprascapularis.
--------------------------------	---	--

*Principal Divisions of the
Arteries.*

Branches of the Arteries.

E. E. AXILLARY ARTERY	<ul style="list-style-type: none"> 1. Superior Thoracic Artery. 2. Thoracica Longior. 3. Thoracica Humeraria. 4. Subscapularis. 5. Circumflexa Posterior. 6. Circumflexa Anterior.
F. F. The BRACHIAL ARTERY*	<ul style="list-style-type: none"> 1. Profunda Humeri Superior. 2. Anastamoticus Major.
G. The RADIAL ARTERY	<ul style="list-style-type: none"> 1. Recurrens Radialis Anterior. 2. Arteria Superficialis Volæ. 3. Arteria Palmaris Profunda.
H. The ULNAR ARTERY	<ul style="list-style-type: none"> 1. Recurrens Ulnaris Anterior. 2. Recurrens Ulnaris Posterior. 3. Arteria Dorsalis Ulnaris. 4. Arteria Palmaris Profunda.
I. INTEROSSEOUS ARTERY	<ul style="list-style-type: none"> 1. Interossea Superior Perforans. 2. Recurrens Interossea.
K. CAROTID ARTERY.	
L. EXTERNAL CAROTID	<ul style="list-style-type: none"> 1. Arteria Thyroidea Superior. 2. Arteria Lingualis. 3. Arteria Labialis or Facialis. 4. Arteria Occipitalis. 5. Posterior Auris. 6. Arteria Maxillaris Interna. 7. Arteria Transversalis Faciei. 8. Arteria Temporalis.
M. INTERNAL CAROTID	<ul style="list-style-type: none"> 1. Arteria Anterior Cerebri. 2. Arteria Media Cerebri. 3. Arteria Communicans.

* On the left side there is a high bifurcation of the artery.

*Principal Divisions of the
Arteries.*

Branches of the Arteries.

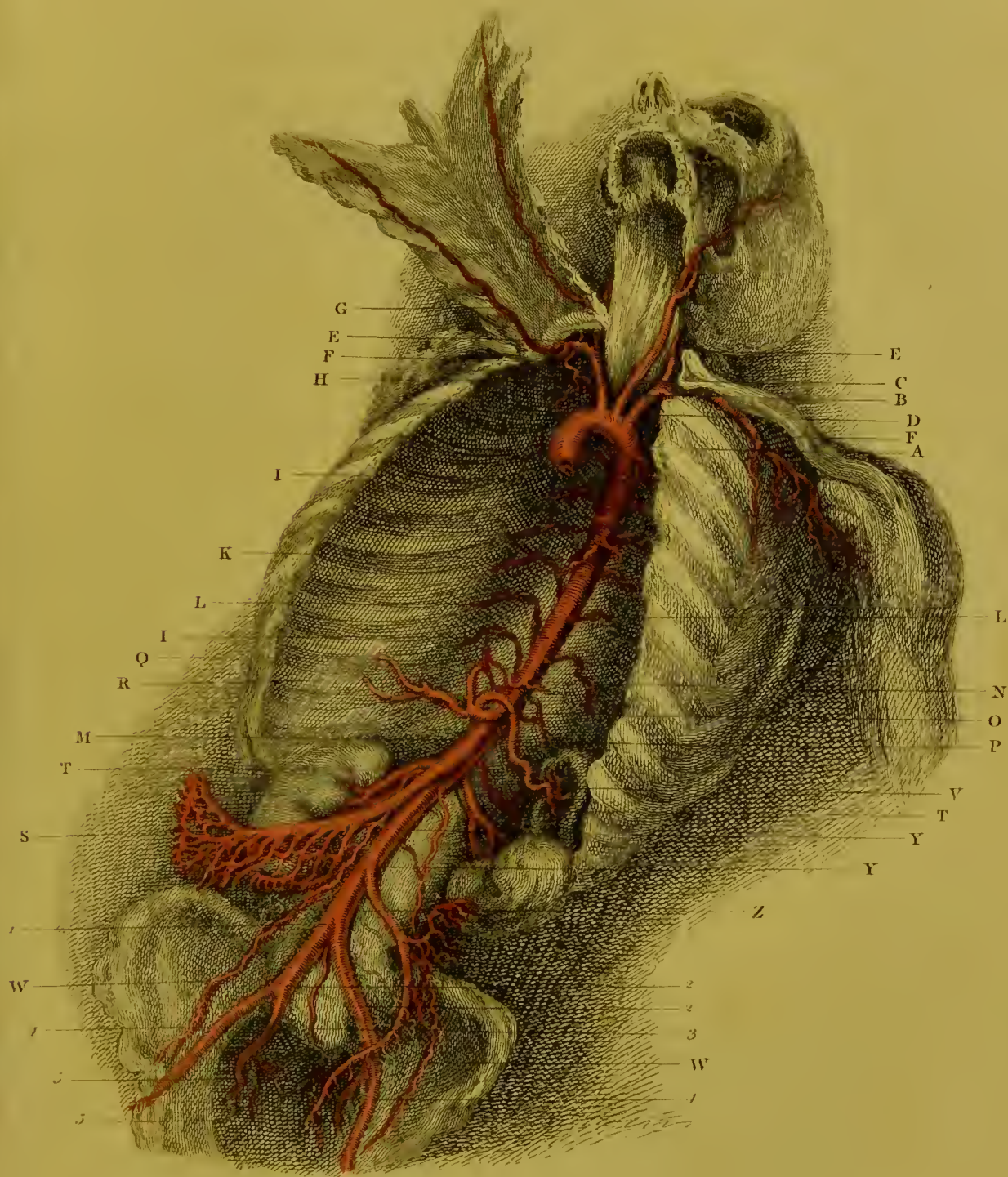
N. VERTEBRAL ARTERY	{	Arteria Cerebelli Posterior and Anterior.
O. BASILAR ARTERY	{	1. Arteria Communicans. 2. Arteria Cerebri Posterior.
P. THORACIC AORTA	12345678910	Art. Intercostales.*
Q. ABDOMINAL AORTA	{	1. Arteria Phrenica. 2. Arteria Cœliaca. { 3. Coronaria Ventriculi. 4. Arteria Hepatica. 5. Arteria Splenica. 6. Mesenterica Superior. 7. Arteriæ Capsulares. 8. Arteriæ Emulgentes. 9. Arteriæ Spermaticæ. 10. Mesenterica Inferior. 11. Arteriæ Lumbales. 12. Arteria Media Sacra.
R. COMMON ILIAC ARTERY.		
S. INTERNAL ILIAC	{	1. Arteria Obturatoria. 2. Arteria Glutea. 3. Arteria Ischiatica. 4. Arteria Pudica.
T. EXTERNAL ILIACS	{	1. Arteria Epigastrica. 2. Circumflexa Ilii.
U. FEMORAL ARTERY	{ 3. Profunda Femoris {	1. Circumflexa Externa. 2. Circumflexa Interna. 3. Perforantes.
V. POPLITEAL ARTERY	{	1. Arteria Articularis Superior Externa. 2. ————— Interna. 3. ————— Media. 4. ————— Inferior Externa. 5. ————— Interna.

* The Aorta, when it is behind the root of the lungs, gives three or four arteries to nourish their substance, called Bronchial Arteries. Lying beside the Œsophagus, also, it gives to it a few arteries, the Œsophageal Arteries.

*Principal Divisions of the
Arteries.*

Branches of the Arteries.

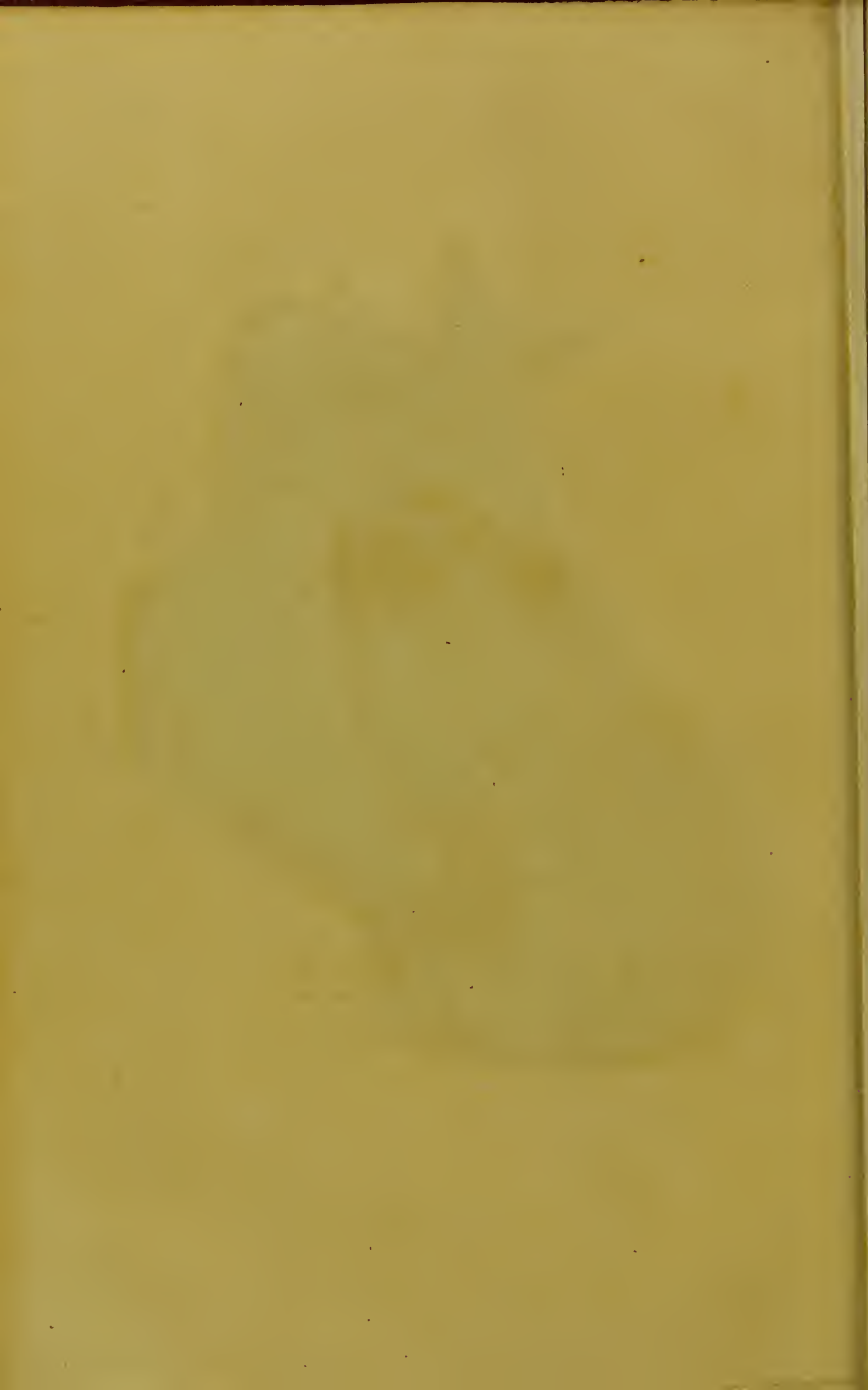
W. ANTERIOR TIBIAL AR- TERY	{ 1. Recurrens Tibialis Antica. 2. Malleolaris Interna.
X. POSTERIOR TIBIAL AR- TERY	{ 1. Plantaris Externa. 2. ——— Interna.
Y. FIBULAR ARTERY.	



Drawn by C. Bell.

Etched by J. Steuart.

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EXPLANATION

OF

PLATE III.

-
- A. ARCH of the AORTA.
 B. ARTERIA INNOMINATA.
 C. ——— CAROTIS COMMUNIS SINISTRA.
 D. ——— SUBCLAVIA.
 E. ——— VERTEBRALIS.
 F. ——— AXILLARIS.
 G. ——— MAMMARIA INTERNA.
 H. ——— INTERCOSTALIS SUPERIOR.
 I. I. ——— AORTA THORACICA DESCENDENS. *

* *Descending Thoracic Aorta.* — In my Collection in Windmill-Street there is a series of preparations, thirty in number, exhibiting Aneurisms of the Aorta. These illustrate the whole pathology of their growth and structure. They show the extent to which these aneurisms sometimes grow, and the accidents they produce upon the surrounding parts, and the different ways of their bursting. For their descriptions and histories see the division of the catalogue of the Structure and Diseases of the Circulating System.

K. ARTERIÆ ÆSOPHAGEÆ.

L. L. ——— INTERCOSTALES INFERIORES.

M. ABDOMINAL AORTA.

N. ARTERIÆ PHRENICÆ.

O. ARTERIA CÆLIACA.

Branches of the CÆLIACA	{	P. Arteria Splenica. Q. — Coronaria Superior Ventriculi. R. — Hepatica.
-------------------------	---	---

S. MESENTERICA SUPERIOR.

T. ARTERIÆ EMULGENTES.

V. ——— CAPSULARES.

W.W. ——— SPERMATICÆ.

Y. ARTERIA MESENTERICA INFERIOR.

See the History of an Aneurism of the Aorta, with Remarks on Aneurisms in general, by Dr. Wm. Hunter. — *Medical Observ. and Inq.* vol. i. p. 323.

Aneurism of the Aorta. — *Ibid.* vol. iii. p. 57.

Cases of Two Aneurisms of the Aorta. — *Ibid.* vol. iii. p. 14.

Aneurism of the Aorta which burst into the Trachea; and One of the Carotid. — *Ibid.* vol. vi. p. 23.

Case related by Sir John Pringle of a burst Aorta and the Formation of a large Aneurism. — *John Bell's Principles of Surgery*, vol. i. p. 332.

Abdominal Aorta obstructed. — See *Mr. John Bell's Principles of Surgery*, vol. i. p. 245.

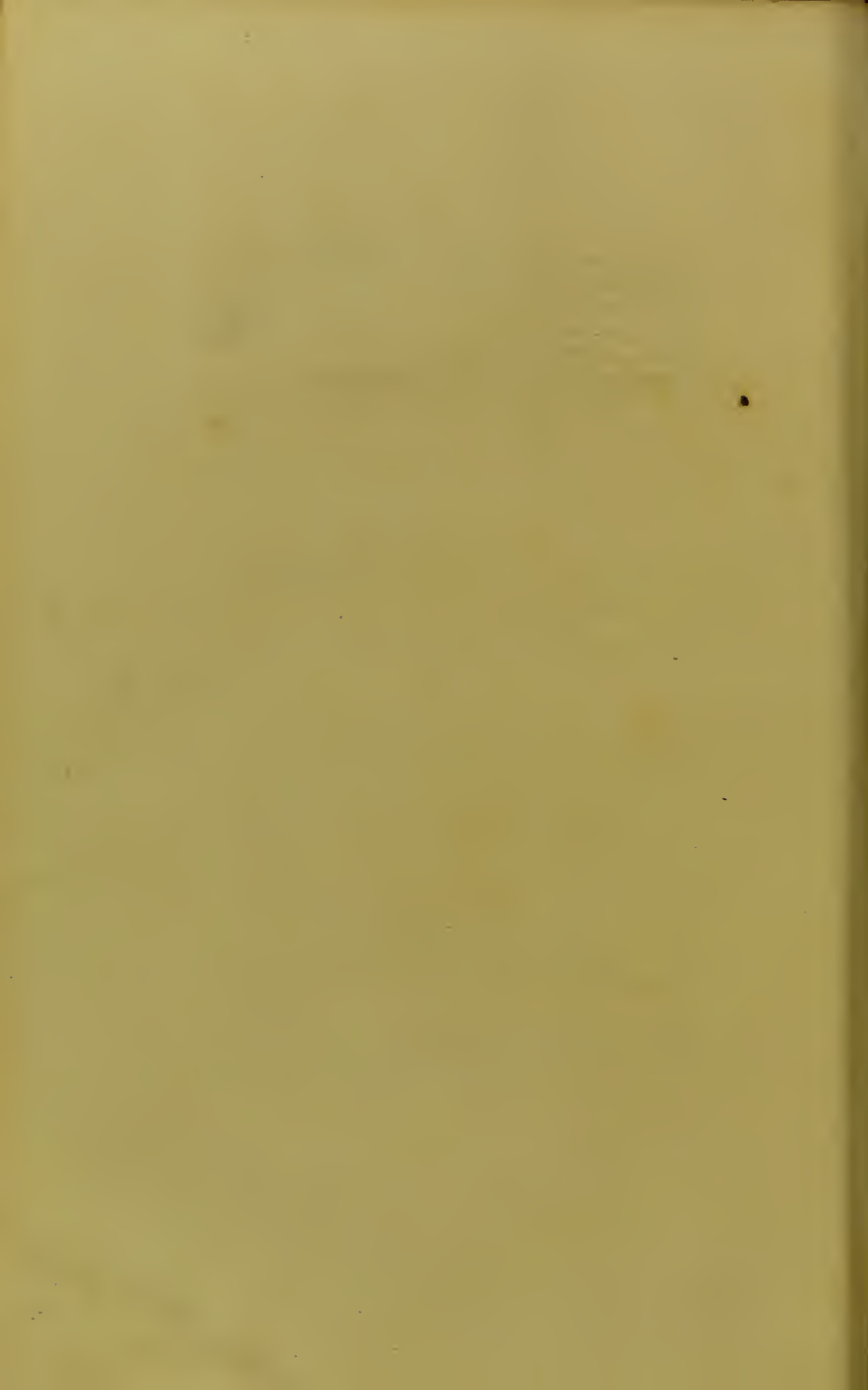
Case of Aorta obliterated: by Dr. Crampton. — See *Dublin Hosp. Reports*, vol. ii. p. 193.

Aorta tied by Sir Astley Cooper. — See *Cooper's and Travers's Surgical Essays*. — This operation has been very generally condemned.

See a Paper by Dr. Matthew Baillie upon a strong Pulsation of the Aorta, in the Epigastric Region, in the *Trans. of the Col. of Phys.* vol. iv. p. 271. Very important.

Case of Aneurism of the Arch of the Aorta communicating with the Trachea and Œsophagus. — Another Case in which the Aneurism communicated with the Pulmonary Artery: by Dr. Wells. — *Trans. of a Society for the Improvement of Medical and Surgical Knowledge*.

- z. One of the Lumbar Arteries.
- 1. Bifurcation of the Aorta.
- 2. 2. Arteriæ Iliacæ Communes.
- 3. ——— Sacra Media.
- 4. 4. ——— Iliacæ Externæ.
- 5. Ramifications of the internal Iliac Artery.







ARTERIES OF THE HEAD.

EXPLANATION

OF

PLATE IV.

FINDING in the head of this black the most common and regular distribution of the branches of the Carotid Artery, I took this sketch from it. The appearance of the eye and mouth is neither like the living nor the dead, but those accustomed to anatomy will perhaps recognise the turgescence of the Injected Head.

The neck and part of the face is dissected.

- A. The TRACHEA, or windpipe.
- B. Muscles of the fore part of the Throat, viz. *Sterno-Hyoideus* and *Sterno-thyroideus*.
- C. The THYROID GLAND.*

* *Thyroid Gland.* — This is one of the glandular bodies, the nature and function of which is little known. But it is important to observe, that it swells with the irregularities of the female system; that it is often enlarged, and yet harmless; that it is the seat of the Goître; that it is sometimes scirrhus and hard, and the cause of suffocation.

- D. The *Digastricus* or *Biventer Maxillæ Inferioris*. This double-bellied muscle is preserved here to mark the relation of the principal branches of the external Carotid Artery.
- E. The PAROTID GLAND: it is dissected back from the jaw, to shew the course of the Artery.
- F. The muscle *Sterno-Cleido-Mastoideus*.
- G. An enlarged Lymphatic Gland, of the cluster called *Concatenatæ*.
- H. The *Masseter* Muscle.
- I. The Duct of the Parotid Gland cut across.

ARTERIES.

- 1. CAROTIS COMMUNIS. * This, the Common Carotid Artery, gives off no small branches, but divides near the angle of the jaw.

* *Carotis Communis*. — For the strict anatomy of the Carotid, the relation of the Internal Jugular Vein and the Par Vagum, and the manner of operating to tie it, — see my *Illustrations of the great Operations of Surgery, under the Head of Carotid Aneurism*.

The Carotid Artery tied for Aneurism, by Sir Astley Cooper. — See *Med. Chir. Trans.* vol. i. pp. 1. and 222.

This Artery tied by Mr. John Bell. — See his *Principles of Surgery*, second edition.

The Carotid tied by Dr Browne. — See vol. i. p. 301. *Dublin Hosp. Rep.*, where the circumstances attending the wound of this artery are very well detailed.

The common Carotid tied by Mr. Travers for Aneurism of the Orbit by Anastomosis. — See *Med. Chir. Trans.* vol. ii. p. 1.

Case of common Carotid tied by Mr. Abernethy, on account of a torn Wound under the Jaw. — See his *Surgical Observations*.

Case in which Mr. Dalrymple, of Norwich, tied the common Carotid for Aneurism by Anastomosis in the left Orbit. — *Med. Chir. Trans.* vol. vi. p. 111.

The common Carotid tied for a Wound through the Mouth by Mr. Collier. — *Ibid.* vol. vii. p. 107.

The same case. — See *Operative Surgery*, vol. ii. p. 287.

The common Carotid tied by Mr. Goodlad before the Extirpation of a large Tumor. — *Med. Chir. Trans.* vol. vii. p. 112. See *Appendix*, vol. viii. p. 582.

2. CAROTIS INTERNA or CEREBRALIS. This Internal Carotid Artery makes so sudden an angle here, that it is indeed (especially when injected) the most superficial of the two grand divisions. *
3. CAROTIS EXTERNA SUPERFICIALIS. This External Carotid Artery divides into seven principal branches, which now follow :
4. ARTERIA THYROIDEA. † The branches of the Thyroid Artery are these :

The common Carotid tied by Mr. Brodie for continued Hæmorrhage after the Extraction of a Tooth. The bleeding did not stop. — *Ibid.* vol. viii. p. 226.

The common Carotid tied for a Species of Nævus Maternus, by Mr. Wardrop. — *Ibid.* vol. ix. p. 199.

The common Carotid tied for Aneurism, by Mr. Vincent. — *Ibid.* vol. x. p. 212.

The common Carotid tied for Aneurism, by Mr. Lyford, Winchester. — *Ibid.* vol. xi. p. 97.

The common Carotid tied for Aneurism by Mr. Coates, Salisbury. — *Ibid.* vol. xi. p. 277.

Wound of the Carotid Artery by a Sword, succeeded by an Aneurism, given by Harderius in *Apiario Observ.* 86. The Surgeon opened the tumour, intending to secure the vessel. The patient expired shortly after.

Instance of an Aneurism of the Carotid at its Bifurcation. It was completely filled with coagulum, and had undergone a process of spontaneous cure. — See a *Paper of Dr. Matthew Baillie on the Diseases of Blood-vessels*, vol. i. of *Trans. of a Soc. for the Imp. of Med. and Chir. Knowledge*.

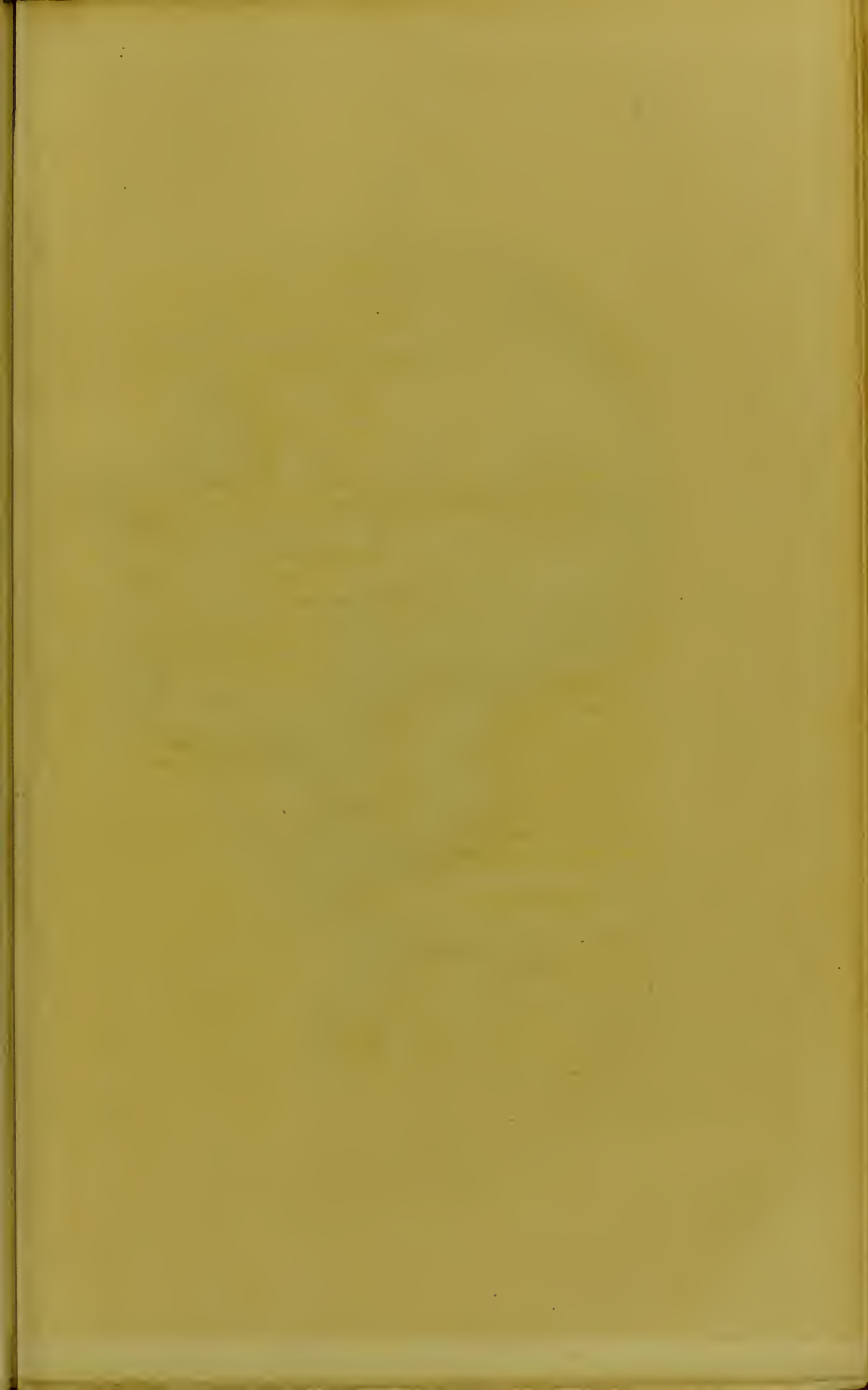
Case of Aneurism of the Carotid which proved fatal by producing irritation and cough, and obstruction to swallowing. — See *John Bell's Princ. of Surg.* vol. iii. p. 250.

* The internal Carotid Artery communicating with an Ulcer of the Throat. — See my *Hospital Reports*.

† *Arteria Thyroidea Superior*. — How to cut for this Artery when wounded, — see *Operative Surgery*, vol. ii. p. 427. The left superior Thyroid Artery was tied for Bronchocele by Mr. Coates. Sir William Blizard tied both for that complaint.

- 5. Thyroidea propria.
- 6. Laryngea, to the epiglottis, and muscles of the arytenoid cartilage.
- 7. Superficialis, muscularis, viz. to the sternocleido mastoideus, to the sternohyoidei, and thyroidei, to the thyrohyoideus.
- 8. ARTERIA LINGUALIS. * The Artery of the Tongue lying deep, and in shadow, I cannot put letters on its branches, which are these :
 - Sublingualis.
 - Dorsalis linguæ.
 - Ranina.
 - Branches irregularly to the muscles of the tongue and pharynx.
- 9. ARTERIA FACIALIS. See the succeeding Plate.
- 10. The *Submentalis*, a branch of the last.
- 11. The continued trunk of the EXTERNAL CAROTID ARTERY.
- 12. The ARTERIA MAXILLARIS INTERNA. Going behind the lower jaw.
- 13. The ARTERIA TRANSVERSALIS FACIEI.
- 14. The ARTERIA TEMPORALIS.
- 15. The OCCIPITALIS.

* How to cut upon it, — see *Operative Surgery*, vol. ii. p.428.





Drawn by A Shaw

Etched by T. Landseer

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EXPLANATION

OF

PLATE V.

1. The CAROTIS DEXTRA, and
 2. The SUBCLAVIA DEXTRA, arising from the ARTERIA INNOMINATA.
- The SUBCLAVIA DEXTRA, where it passes over the first rib, gives off the following branches :
3. *Mammaria Interna.*
 4. 4. *Vertebralis.* In its course through the transverse processes of the cervical vertebræ it sends out small branches to the museles, and supplies the theea and spinal marrow. Before entering the formamen magnum, it makes some large turns which are represented in the plate. Refer to Plate VII. for its further distribution.
 5. *Thyroidea Inferior*, which sends off, 6. *Transversalis humeri*, giving rise in this instance to the supra-seapularis. 7. *Thyroidea ascendens.* 8. *Thyroidea propria.* 9. *Cervicalis profunda.* 10. *Cervicalis superficialis.*
 11. *Intercostalis Superior.*

The Common Carotid divides into Internal and External Carotid.

12. CAROTIS INTERNA.
13. CAROTIS EXTERNA: which gives off,
14. *Thyroidea Superior*. And there are, arising from it,
 15. Rami musculares. 16. Arteria laryngea. 17. Ramus Arteriæ Thyroidæ Proprius.
18. *Lingualis*. The origin of this artery from the trunk of the carotid cannot be seen, as it is obscured by the next artery, which arises more superficially. The lingual artery dives deep, and these are its branches: Sublingualis, dorsalis linguæ, ranina, and irregular branches to the muscles of the tongue, and the pharynx.
19. *Facialis*. * It gives off the palatina ascendens, and branches, to the glands and muscles of the tongue, which may be seen rising under the lower jaw, and passing deep. 20. Submentalis is the next branch; which gives its ramus superficialis, and ramus profundus to the sub-maxillary gland, and to the muscles. 21. Branches to the masseter and buccinator muscles. 22. Arteria muscularis labii inferioris (of Haller†). 23. Coronaria labii inferioris. 24. Coronaria labii superioris. 25. Arteria angularis, giving off, 26. 26. Arteriæ nasales laterales. After giving a few other branches to the side of the nose, it inosculates with the branches of the 27. Ophthalmica cerebialis, which is seen arising out of the inside of the orbit.

Pharyngea ascendens comes next in the order of distribution.

* Facial artery or labialis, or maxillaris externa or angularis, often tortuous before rising over the jaw. — *Haller. Icon. Arter. Cap.* tab. ii. E. iii. 28. *Couper's Myotomia*, Plate XXII. o.o.o. The artery is not in its place at F, tab. xxiii. This artery left untied in an operation, almost suffocating the patient afterwards. — See *Abernethy's Surgical Observations*.

† A very small branch of the internal maxillary artery comes out through the mental foramen, and inosculates here with the facial artery. — See *Haller. Icon. tab. Faciei. Arter.*

The course of this artery is so deep, that in this view it is hidden by the other large trunks.

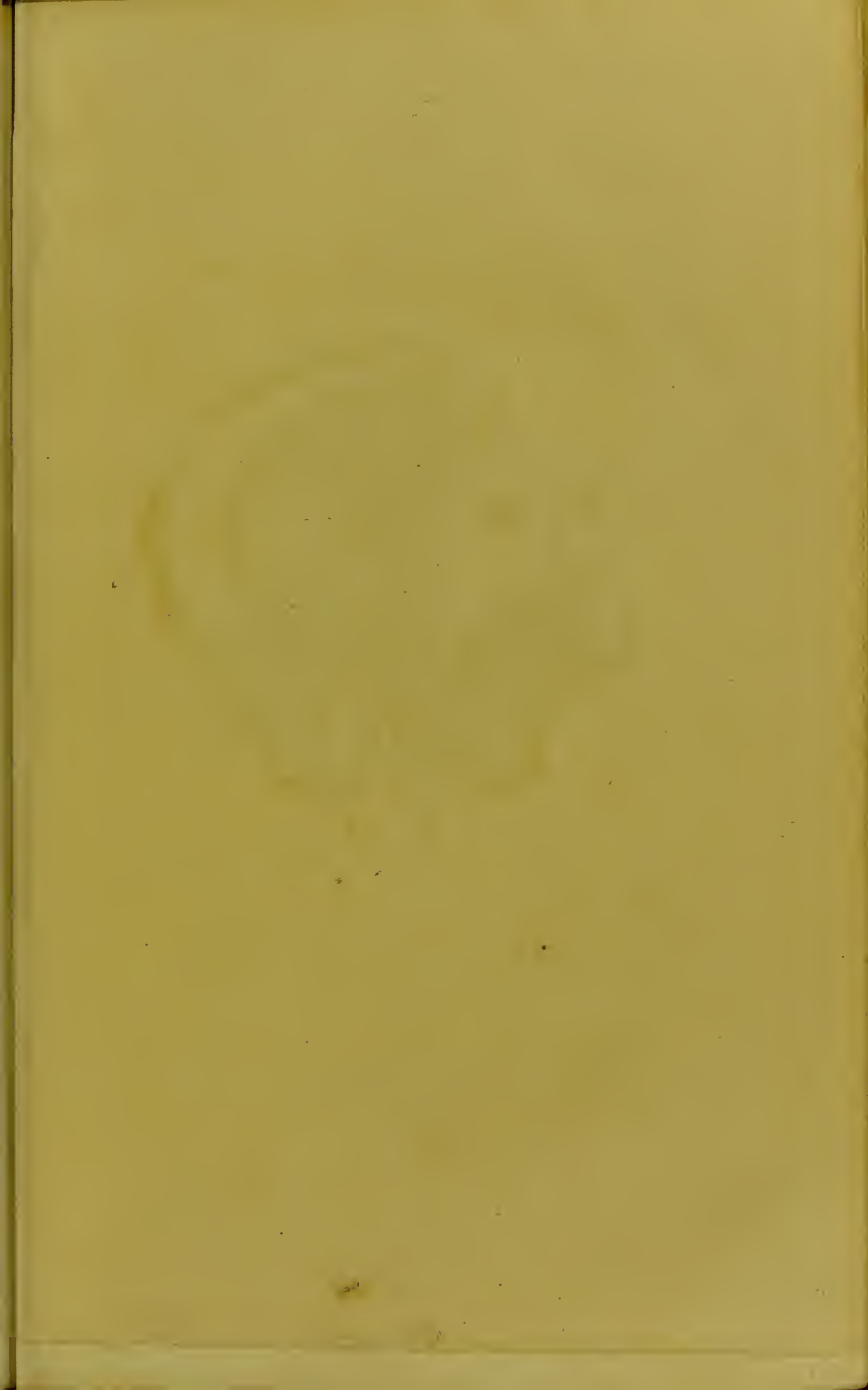
28. *Occipitalis* * is seen giving off just at its root, 29. A branch which is distributed to the muscles, and inosculates with the arteries coming from the inferior thyroid artery. 30. Ramus auricularis. 31. Ramus temporalis posterior. 32. Ramus cervicalis dividing into, 33. Ramus superficialis, and, 34. Ramus profundus. The latter branch inosculates with the vertebral artery. 35. Arteria occipitalis propria ascendens. A small branch passes through the foramen mastoideum posterius to the dura mater.
36. *Arteria Posterior Auris* gives branches to the parotid gland; to the meatus externus of the ear; and a branch called stylo mastoideus to the parts inside of the tympanum.
37. Marks where the origin of the *Maxillaris Interna* ought to be seen. The external carotid now becomes the TEMPORAL ARTERY. Its first branch is,
38. *Arteria Transversalis Faciei*.† This artery runs across the cheek, in the direction of the parotid duct, and gives off branches to the parotid gland as it passes through it. It gives branches to the joint of the jaw-bone, to the masseter, buccinator, and fat, and terminates in inosculations with all the arteries of the face.

* The occipital artery is found immediately under the mastoid process: from under the insertion of the mastoid muscle it runs backwards on a level with the lobe of the ear, under the insertion of the trapezius, and, of course, under the superior transverse ridge of the occipital bone. On the side of the neck, the internal jugular vein is immediately under it: it is under the origin of the digastricus muscle.

† This artery I have seen bleed very smartly. In cuts of the face, when either this or any other of the arteries of the face are opened, we have only to use the twisted suture, taking care to pass the needle so near the bleeding orifice that it may receive the full operation of the thread when twisted round the needle or pin. This secures the artery, and at the same time brings the lips of the wound neatly together. — See *Operative Surgery*.

39. *Anterior Temporal Artery.* 40. Inosculating branches
with the supra orbitalis of the ophthalmica.
41. *Posterior Temporal.* *
42. *Supra Orbitalis* of the ophthalmica cerebialis.

* The superficial temporal arteries are two in number, viz. the anterior and posterior: the middle also rises from this, but is under the fascia. The deep temporal is a branch of the arteria maxillaris interna.





Engraved by C. Bell

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EXPLANATION

OF

PLATE VI.

*Being a View of the Course of the Internal Carotid Artery,
and the Vertebral Artery, as seen upon making a vertical
Section of the Head.*

FIG. I.

- A. The Upper Jaw Bone ; part of it is torn away.
- B. The Lower Jaw Bone ; all the angle of the right side is taken away.
- C. The Tongue.
- D. The Antrum Highmorianum, torn open.
- E. The Vertebrae of the Neck, cut to show the passage of the artery, encased in the bones.
- F. F. The Scull-cap, sawn through parallel to the longitudinal sinus.
- G. The Falx, which divides the hemispheres of the Brain.
- H. The Longitudinal Sinus.

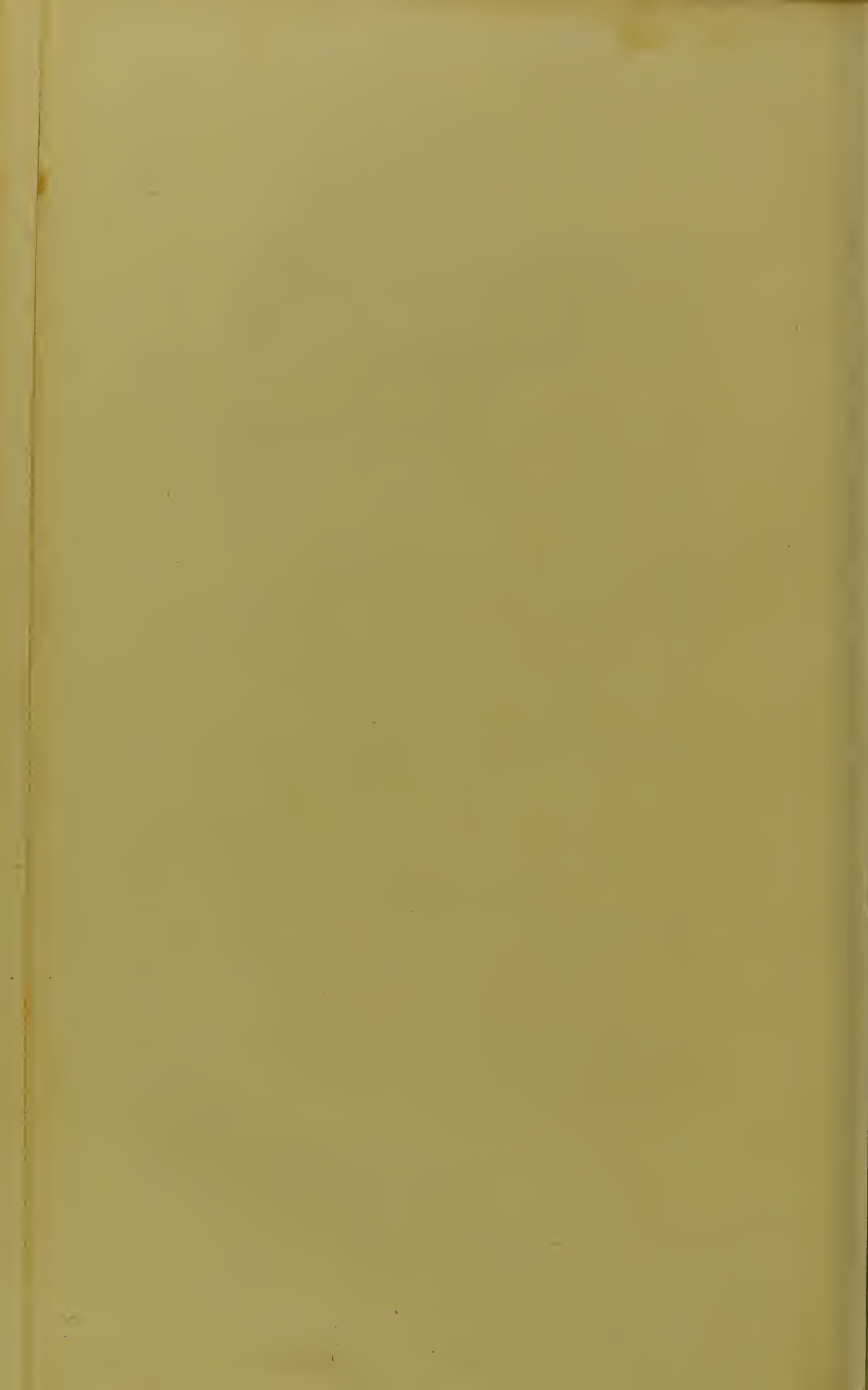
- i. The Fourth Sinus, returning the blood from the lower sinus of the falx, and from the vena Galeni.
- κ. Right Lateral Sinus.
- λ. The Tentorium, which covers the cerebellum, and supports the posterior lobes of the cerebrum.

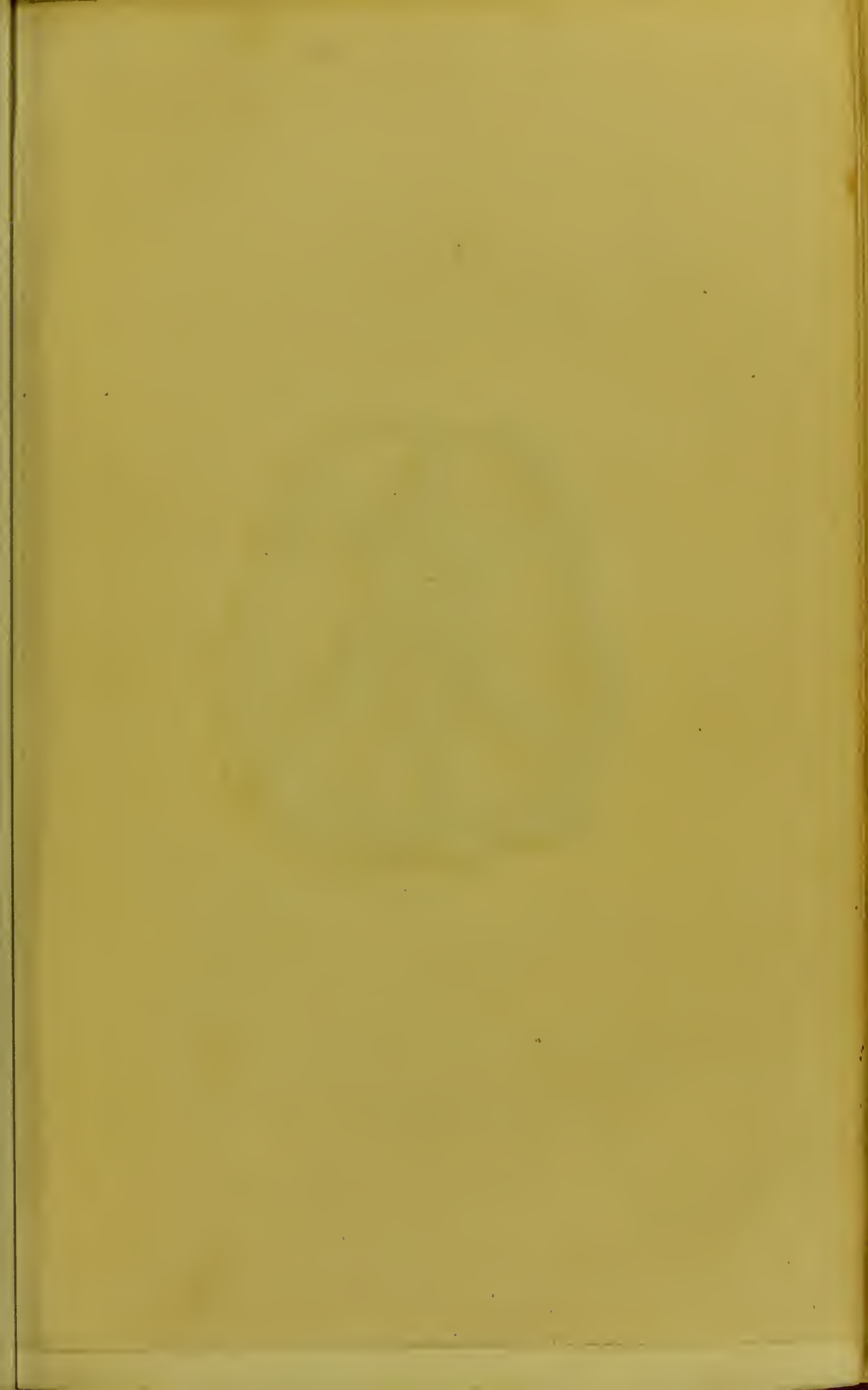
ARTERIES.

1. The COMMON CAROTID ARTERY.
2. The INTERNAL CAROTID ARTERY.
3. The EXTERNAL CAROTID ARTERY.
4. The VERTEBRAL ARTERY; the processes of the vertebræ being cut away.
5. The last and violent turn of the Vertebral Artery, before entering the foramen magnum of the occipital bone.
6. The violent contortions of the Internal Carotid Artery, before entering the skull.
7. The point of the Internal Carotid Artery, where, after making its turns in its passage through the bone, it appears by the side of the sella Turcica.*
8. The OPHTHALMIC ARTERY, derived from the carotid. It is this artery which is seen to inosculate with the Facial Artery in the preceding plate.
9. The THYROID ARTERY.
10. The LINGUAL ARTERY.
11. The FACIAL ARTERY cut short; it is seen on the 4th Plate, fig. 9., passing over the jaw.
12. The Continued Trunk of the External Carotid Artery; it is about to divide into the temporal and internal maxillary arteries.
13. The TEMPORAL ARTERY, cut short.

* The internal carotid arteries found aneurismal where they lie by the side of the sella turcica in a patient of Sir Gilbert Blane's. — See *Dr. Baillie's Morbid Anatomy*; and the *Transactions of a Soc. for the Improv. of Surgical Knowledge*.

14. The INTERNAL MAXILLARY ARTERY.
15. That Branch of the Internal Maxillary Artery, which passes into the lower jaw.
16. The GREAT or MIDDLE ARTERY of the DURA MATER;
a branch of the internal maxillary.







Drawn by C Bell

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EXPLANATION

OF

PLATE VII.

ARTERIES OF THE BRAIN.

DIVISIONS OF THE BRAIN.

- A. A. The Anterior Lobes of the Cerebrum.
- B. B. The Middle Lobes of the Cerebrum.
- C. C. The Posterior Lobes of the Cerebrum, which rest upon the tentorium.
- D. The Right and Left Lobes of the Cerebellum.
- E. The MEDULLA OBLONGATA.
- F. The OPTIC NERVES, cut at their union.
- G. The CORPORA ALBICANTIA : the INFUNDIBULUM is seen betwixt these and the optic nerves.
- H. H. The CRURA CEREBRI.
- I. The PONS VAROLII, or Tuberculum Annulare.

- K. The Eminences of the Medulla Oblongata, called CORPORA PYRAMIDALIA.
 L. The CORPORA OLIVARIA.

ARTERIES.

- 1, 2. The Right and Left Carotid Arteries, raised with the brain, and cut off as they rise at the point marked in the preceding Plate (7.), that is, as they rise by the side of the sella Turcica.*
- 3, 4. The Right and Left VERTEBRAL ARTERIES.
5. The union of the Vertebral Arteries to form the BASILAR ARTERY.†
6. The Communicating Artery, or Anastomosis, betwixt the Basilar Artery and Carotid.
7. The Union of Communication betwixt the carotids of each side by the anterior artery of the cerebrum; these anastomoses 6 and 7 form the CIRCLE OF WILLIS.

DIVISIONS OF THE INTERNAL CAROTID ARTERY.

8. The MIDDLE ARTERY OF THE BRAIN passing into the FISSURA SILVII.‡
9. The ANTERIOR ARTERY of the CEREBRUM.§

BRANCHES OF THE VERTEBRAL AND BASILAR ARTERIES.

10. The POSTERIOR ARTERY of the CEREBELLUM from the Vertebral Arteries.

* Here they are sometimes aneurismal.

† Aneurism of the size of a horse-bean occurring in this artery. — See *Hodgson on the Arteries*, p. 76. See also *Cheyne on Apoplexy*.

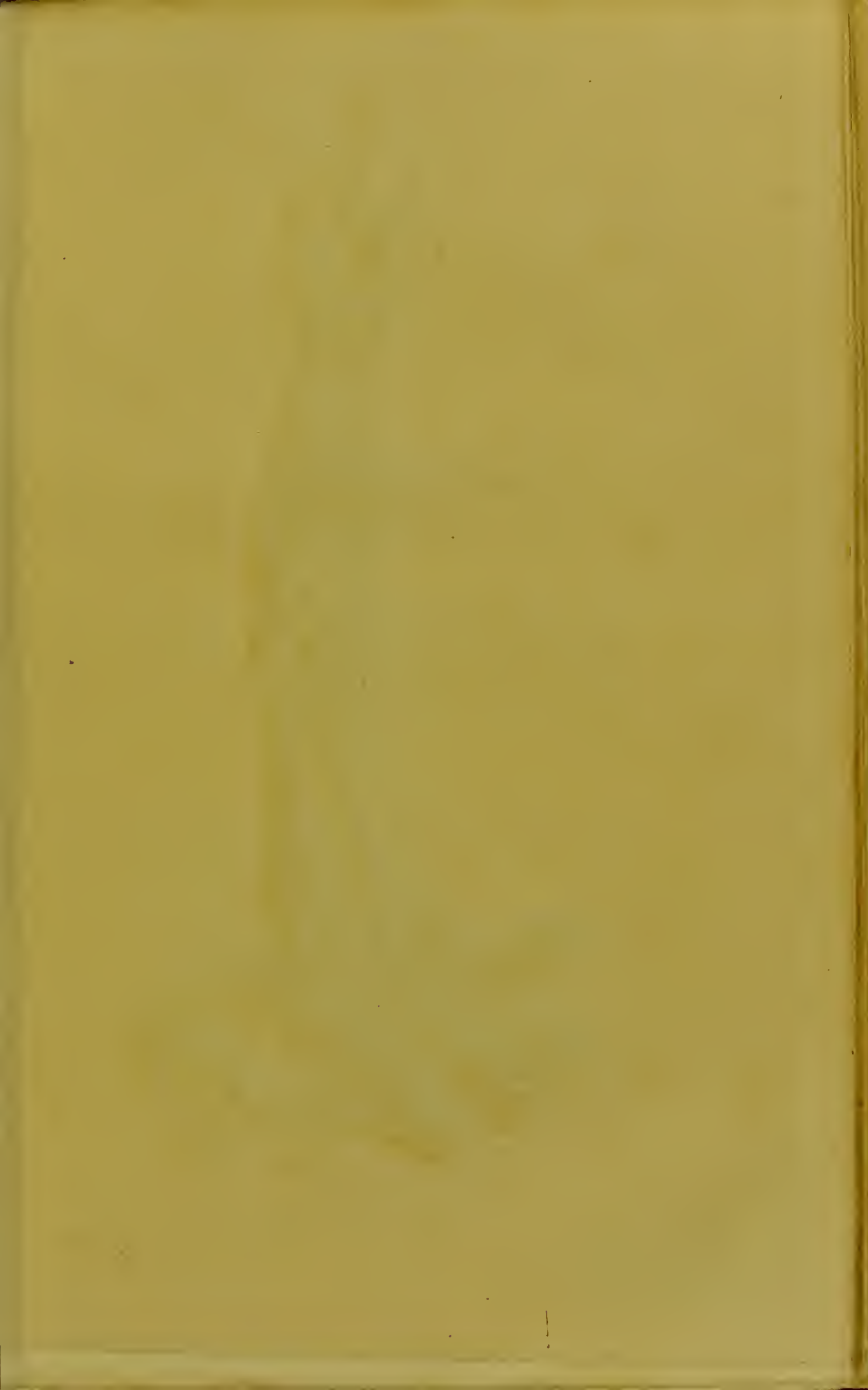
‡ Twice have I known the artery at this place burst by blows on the head, and proving fatal.

§ Case of a small aneurism of this artery in a lunatic. — *Hodgson on the Arteries*, p. 132.

11. A very considerable branch of the Basilar Artery to the pons Varolii and cerebellum, which however has no name.
12. The ANTERIOR ARTERY of the CEREBELLUM.
13. The Posterior Artery of the Cerebrum.

The lesser branches of vessels seen in this Plate are not distinguished by any particular names.







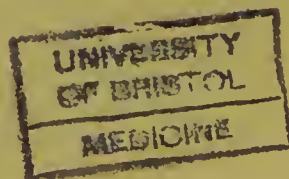
EXPLANATION

OF

PLATE VIII.

THE ARTERIES OF THE ARM.

- A. The CLAVICLE.
- B. The CORACOID PROCESS of the Scapula.
- C. The PECTORALIS MINOR.
- D. The PECTORALIS MAJOR.
- E. The DELTOIDES seen in part.
- F. The STERNUM.
- G. The MAMMA lying on the Ribs.
- H. The LATISSIMUS DORSI.
- I. The TRICEPS EXTENSOR CUBITI.
- K. The CORACO-BRACHIALIS.
- L. The BICEPS FLEXOR CUBITI.
- M. The BRACHIALIS INTERNUS.
- N. The Inner Condyle of the Humerus.
- O. The PRONATOR TERES.



- p. The SUPINATOR LONGUS.
- q. The Mass of Flexor Muscles dissected up.
- r. The FLEXOR CARPI ULNARIS.
- s. The Pisiforme Bone.
- t. The Tendons of the Fingers.

ARTERIES.

I. The SUBCLAVIAN ARTERY.*

* Aneurism in the Arm cured by tying the Subclavian Artery, by Dr. Post, of New York. — *Med. Chir. Trans.* vol. ix. p. 26.

The Subclavian Artery tied by Mr. Kcate, for Axillary Aneurism. — See *Med. Rev. and Mag.* for 1801.

Case of Axillary Aneurism, and Description of the Operation of tying the Subclavian Artery. — *Ramsden on Aneurism.*

Case of Subclavian Aneurism operated on with success, by Mr. Wishart, Edinburgh. — See *Med. and Surg. Journal*, No. LXXVIII.

Case of Axillary Aneurism for which the Subclavian Artery was tied with success, by Dr. Gibbs. — *Med. Chir. Trans.* vol. xii. p. 531.

Case of Axillary Aneurism in which the Clavicle was greatly pushed up; and Sir A. Cooper was obliged to abandon the attempt to secure the Subclavian Artery. — *Lond. Med. Rev.* vol. ii. p. 300.

Case of Axillary Aneurism and the Subclavian Artery tied by Mr. Tod. — See *Dublin Hosp. Rep.* vol. iii. ; and Mr. Shaw's *Manual of Anatomy*, third edition.

Case by Mr. Blizard.

To cut for the Subclavian Artery, I recommend the incision to be begun an inch from the inner head of the clavicle; then carry it in a direction slightly deviating from the line parallel with the clavicle, towards the acromion scapulæ. The second incision cuts the fibres of the pectoralis major, where they arise from the clavicle; here we come upon a thick bed of cellular membrane, which being lifted, we find the great subclavian vein, with the cephalic vein joining it; under this vein, and a little further backward (more under the clavicle), we find the Artery.

Case by Mr. Smith, of Leeds, in which the Artery was tied below the Clavicle: all the steps of the operation are particularly detailed. — See *Manual of Anatomy*, by John Shaw, p. 400. Second edition.

The Extent of the
AXILLARY AR-
TERY is from 1
to 9. *

2. Three Thoracic Arteries :

Thoracica Superior, which gives branches between the first and second ribs.

Thoracica Humeraria, or *Acromialis*, giving branches between the Pectoralis Major and Deltoid.

Thoracica Alaris, to the fat, and glands of the Axilla, Pectoralis Minor, &c.

3. The long Thoracic Artery or EXTERNAL MAMMARY Artery, to the Pectoralis Major and Mamma.

4. SUBSCAPULAR ARTERY.

* If we have to turn up the edge of the pectoralis major, to tie the axillary artery, we find the artery on the inside of the coraeo brachialis ; the external cutaneous nerve is on the outside of the artery, the radial nerve on the inside, and the museular spiral below it ; the vein is betwixt the artery and the musele ; higher up in the axilla the artery is involved in the plexus.

I need scarcely repeat, that in these descriptions of the exact seat of the arteries I intend that they should enable the surgeon to avoid them, as well as to cut upon them and take them up. By attending to the above circumstances I cut a ragged ball out from behind the artery and nerves without hurting either. — *Laceration of this Artery.* GOOCH. — *White's Cases by Gunshot.* — *Principles of Surgery*, 292.

Case of Axillary Aneurism. The Artery was tied, by Pelletan, below the Clavicle. — *Clinique Chirurg.* tom. ii. p. 49.

Case of a Wound of the Axillary Artery, in which Dessault at first tied the Artery below the Clavicle, and afterwards at the place where it was wounded. — *Œuvres Chirurg. de Dessault*, tom. ii. p. 553.

Case of Axillary Aneurism, in which the Artery was tied below the Clavicle, by Mr. Chamberlayne. — *Med. Chir. Trans.* vol. vi. p. 128.

Case of a Wound of the Axillary Artery by a Sword. — *Lond. Med. Journ.* vol. iv.

Case of Aneurism of the Axilla, in which no attempt was made to remove it by an operation. — *Essays and Obs. Phys. and Liter. Edin.* 1759. vol. iii.

Case by Mr. Freer of Birmingham.

5. Branches of the Internal Mammary Artery coming through the interstices of the Cartilages of the Ribs. *
6. Branches from the Subscapular Artery to the Mamma. †
7. The POSTERIOR CIRCUMFLEX ARTERY coming in this example from the Subscapular Artery. All the branches of the Subscapular cannot be marked in this view: it gives, 1. branches to the axilla and glands; 2. to the Subscapular muscle; 3. an infra-scapular branch to the muscles of the back; 4. dorsalis or circumflexa subscapularis to the muscles on the back of the Scapula. The Posterior Circumflex gives branches to the heads of the Triceps, Coraco-Brachialis, Deltoid, and Capsule.
8. The ANTERIOR CIRCUMFLEX ARTERY, to the periosteum and capsule.
9. 9. The BRACHIAL or HUMERAL ARTERY. ‡

* These arteries are here particularly large and tortuous, implying, that before the woman's death, the gland had been in a state of activity; probably she was a nurse.

† Thus we see that in the operation of extirpating the cancerous breast, arteries will throw out their blood from all the sides of the gland, chiefly however from 3 and 6.

‡ To find the *Humeral Artery* before coming so low down as this, we may make the patient bend the other arm against a force, in order to throw the expansion of the Biceps Muscle. Having marked its place, we refer it to the wounded arm, and make an incision along the inner edge of the Biceps Muscle, or rather, I may say, just where it begins to throw off its tendinous expansion, that is, two fingers' breadth from the inner condyle of the os humeri; carry the knife upwards. We do not immediately find the artery, but the Radial Nerve covering the artery; laying the nerve aside, we find the artery lying betwixt its two Venæ Comites.

For a description of the manner of operating for Brachial Aneurism, — see *Illustrations of the Great Operations of Surgery*.

Surgical Views of the Arm-pit and the Vessels of the Upper Extremity. — *System of Dissections*, fol. ed.

Case, by Wiseman, of an Operation upon a wounded Humeral Artery. — See *Mr. John Bell's Princ. of Surg.* vol. i. p. 397.

Case of an Oblique Wound of the Humeral Artery; the point of the knife entered on the outer side; the Artery was sought for on the inside. — *Ibid.* vol. i. p. 431.

10. The SUPERIOR PROFUNDA. — 1. To the muscles. 2. *Radialis communicans*, to the external condyle. 3. Branches to the back of the elbow, uniting with the *recurrens interossea* and *radialis*.
11. The LESSER PROFUNDA. — 1. To the brachialis internus and biceps. 2. To the external condyle and supinator. 3. To the ulnar nerve and back of the elbow joint.
12. RAMUS ANASTAMOTICUS MAGNUS. — 1. Branch communicating with the profunda. 2. Descending superficial branch. 3. Descending deep branch: these form, with the recurrents of the arteries of the fore-arm, the *arcus anterior*. 4. Transverse branch which unites to form the *posterior arcus*.
13. The BRACHIAL ARTERY at its bifurcation.*

Case, communicated by Mr. Lawrence, of a divided Humeral Artery secured by one Ligature only. The man died on the seventh day, hæmorrhage coming by the lower orifice, which was left untied. — See *Hodgson on the Arteries*, p. 469.

Case, communicated by Mr. Henry Earle, in which the Humeral Artery was tied on account of a diffused Aneurism of the Fore-arm, caused by a cut from a pane of glass. On the eighth day after the main artery of the arm was tied there was bleeding from the aneurism: the tumour had to be opened, and the radial artery was then secured. — See *Hodgson on the Arteries*, p. 472.

Case of a Wound of the Humeral Artery. — See my *Hospital Reports*, p. 270.

Notice of a case in which the patient died by the occurrence of Hæmorrhage from the Inosculating Vessels; the Humeral Artery having been wounded, and secured only by one Ligature. — See my *Hospital Reports*, p. 282.

I have found, on dissection, that the surgeon had included the Radial nerve in the ligature of the humeral artery. I have found, on dissection, that the surgeon had put the ligature about the Radial nerve, mistaking it for the humeral artery.

* Observations upon Puncture of the Brachial Artery in bleeding. — See *Mr. John Bell's Princ. of Surg.* vol. i. p. 198.

Case of a wound of the Brachial Artery in bleeding, quoted from Bourde-

14. The ULNAR ARTERY. It gives to the elbow-joint *arteria perforans* and *recurrens ulnaris*: to the bone, *arteria nutritia*.
-

lot, physician to the Queen of Sweden, on whom the accident happened, and who underwent the cure by compression. — *Princ. of Surg.* vol. i. p. 206.

Case of Aneurism at the bend of the arm, by Purmannus, and description of his operation. — *Ibid.* vol. i. p. 193.

Description of the appearance of a wounded Brachial Artery, after an Aneurism had formed and burst, from Wiseman. — *Ibid.* vol. i. p. 203.

Unsuccessful attempt to make the Lips of a wounded Brachial Artery heal. — *Ibid.* vol. i. p. 204.

Puncture of the Brachial Artery in bleeding, and the operation for an Aneurism which formed, by Mr. McGill; with observations by Dr. A. Munro. — *Edin. Med. Essays*, vol. ii. p. 224.

Case of Aneurism of the Brachial Artery produced by a puncture in bleeding, and the operation described by Dr. Alex. Munro. — *Edin. Med. Essays*, vol. iv. p. 240.

Case of an Aneurism of the bend of the arm reduced without an operation, with observations by Mr. John Bell. — *Princ. of Surgery*, vol. i. p. 363.

The Dissection of an Arm, with a drawing made from the preparation in Dr. Hunter's Collection, exhibiting the growth of Anastomosing Vessels in a case of Brachial Aneurism which had been successfully operated upon. — See *White's Cases in Surgery*, p. 139.

A case, by Anel, showing that in Brachial Aneurism, produced from a puncture of the lancet, he secured the Humeral Artery above the Tumour; and the patient was cured. — See *Scarpa on Aneurism*, transl. by Wishart, p. 258. 356.

Case of Aneurism at the bend of the arm, with the description of the operation by Flajani. — *Scarpa on Aneurism*, transl. by Wishart, p. 177.

Three cases in which the Humeral Artery was tied: one for Aneurism from a wound by the lancet in bleeding; the second for Aneurism produced from a wound by a knife high in the arm; the third on account of the Artery being opened in a sloughing sore. — See *Scarpa on Aneurism*, transl. by Wishart, p. 429.

A dried preparation of the Arteries which surround the elbow-joint after the operation of tying the Humeral Artery for Brachial Aneurism. — *Catalogue of my Museum in Windmill-Street*.

Case of true Varicose Aneurism from bleeding at the bend of the arm, by Dr. Cleghorn. — *Med. Observ. and Inq.* vol. iii. p. 110.

15. The RADIAL ARTERY. *
16. 16. The RADIAL ARTERY. The same number marks the *recurrens radialis* going to the elbow-joint.
17. The branch of the Radial Artery called *Superficialis Volæ*.
18. The RADIAL ARTERY where it is passing under the tendons of the Extensors of the Thumb.

The description of two cases of Varicose Aneurism at the bend of the arm, in letters addressed to Dr. William Hunter. — *Med. Observ. and Inq.* vol. iv. p. 377.

Mr. Park's anomalous case of Aneurismal Varix. — *Sec-Med. Facts and Observ.* vol. iv. For a drawing illustrating this case, — see *Mr. John Bell's Princ. of Surg.* vol. i. p. 213.

Case of Varicose Aneurism at the bend of the arm, by Dr. Physick of Philadelphia. — *Med. Mus.* vol. i. p. 65.

Preparation of a Varicose Aneurism. In this case there was a high bifurcation of the artery; the superficial artery was wounded in bleeding. The median basilic vein is seen united to the artery, and communicating with the artery by the puncture made in bleeding. The superficial veins are all greatly distended near the elbow. — See *Catalogue of my Museum*.

* To find the Radial Artery in its course one-third down the arm, — cut on the inner edge of the *supinator longus*, first through the thin fascia, then lift the edge of the muscle, and under a second fascia you find the Radial artery passing over the tendon of the *pronator teres*.

To take up the Radial Artery on the wrist, we cut a quarter of an inch from the radial edge of the *Flexor Carpi Radialis*. A fascia covers the artery here. A small nerve (from the *external cutaneous*) runs above the fascia. *N. B.* The insertion of the *Supinator Radii Longus* is on the outside, but flat, giving no mark outwardly. The *Extensor Primi Internodii Polleis* comes obliquely over the head of the Radius, and the insertion of the *Supinator*.

Account of a wound in the palm of the hand, with a description of the appearance of the wound, and the difficulties experienced by the surgeon. *Mr. John Bell's Principles of Surgery*, vol. i. p. 183. — Wounded Radial Artery, which gave great trouble to the surgeons. See *White's Cases in Surgery*, p. 145. — Case by Scultetus of a wounded Radial Artery. *Principles of Surgery*, vol. i. p. 188. — Two cases, by Mr. O'Halleran, of wounds at the wrist, with much loss of blood. *Prineiples of Surgery*, vol. i. p. 190. — Radial Artery wounded in opening an abscess. *Operative Surgery*, vol. ii. p. 346.

19. The deep Palmar Arch, formed principally by the Radial Artery.
20. The Aⁿ. MAGNA POLLICIS, a branch of the Radial Artery.
21. The ULNAR ARTERY lying within the Flexor Carpi Ulnaris.*
22. The Superficial PALMAR ARCH formed by the Ulnar Artery.
23. The Branches called Digitales from the Superficial Palmar Arch.
24. The deep Anastomosing branch of the Ulnar Artery which goes under the tendons of the palm to unite with 19, and form the deep Palmar Arch.
25. The ARTERIA INTEROSSEA, a branch of the Ulnar. (14.) It bestows a branch to the elbow-joint, which is called *Recurrens interossea*.

* *Ulnar Artery*. — In the middle of the fore-arm the artery lies under the fascia, and under the margin of the *Flexor Ulnaris* and *Flexor Digitorum Sublimis*, rather more under the margin of the last. To tie the artery, we should have to cut down betwixt these muscles. The *Ulnar Nerve* lies on the ulnar edge of the artery.

Case, by Mr. Ford, of a wound at the wrist, and the Ulnar Artery tied. — *Principles of Surgery*, vol. i. p. 185.

Five cases of wounds of Radial and Ulnar Arteries, in my *Operative Surgery*, vol. ii. p. 402.





Drawn by C. Heyne.

Etched by C. Bell.

THE ARTERIES OF THE HAND.



EXPLANATION

OF

PLATE IX.

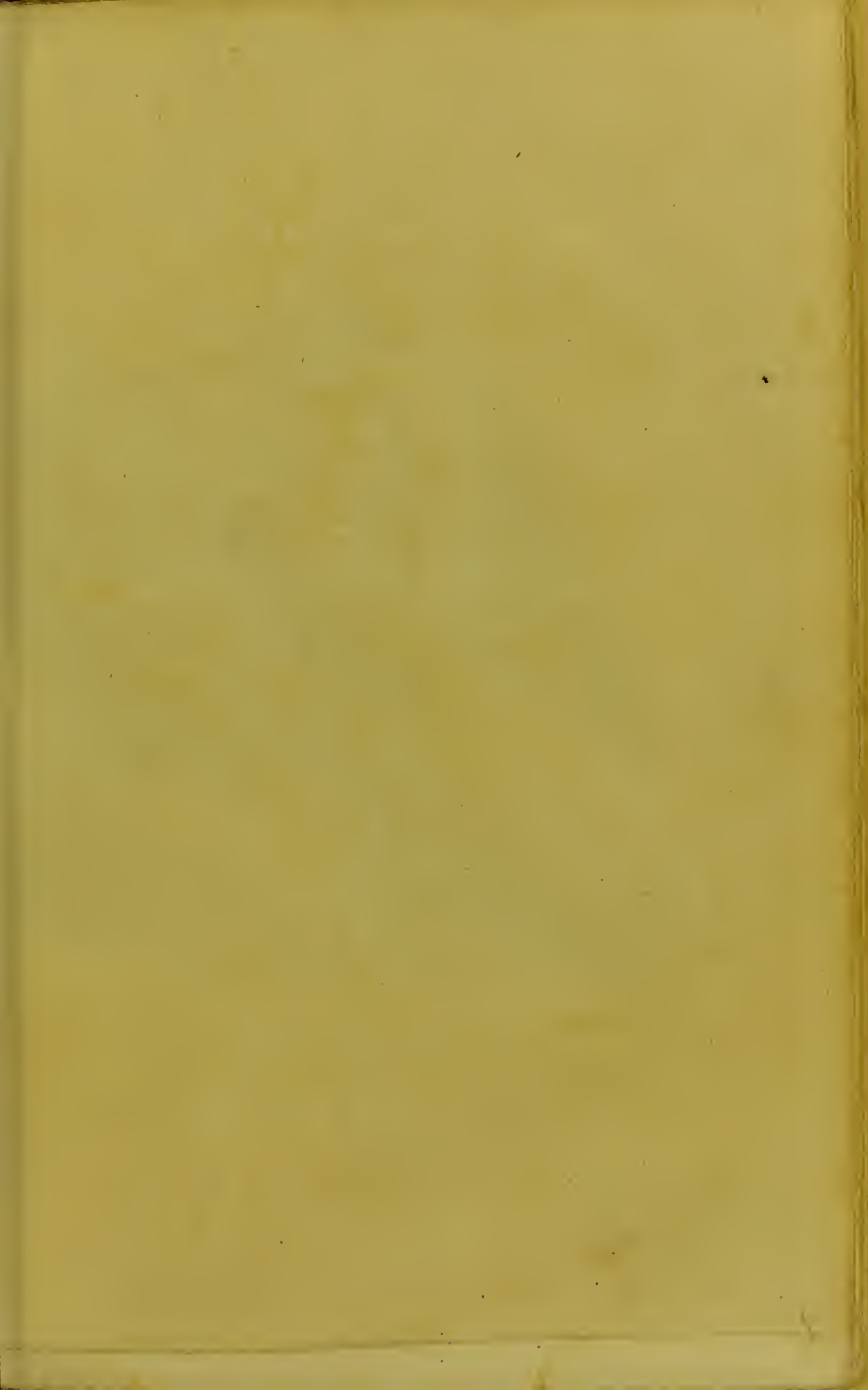


- A. THE *Flexor Tendons*.
B. THE EXTENSOR PRIMUS, SECUNDUS, TERTIUS, POLLICIS.
C. THE Tendon of the EXTENSOR CARPI RADIALIS BREVIOR.
D. THE Tendon of the EXTENSOR CARPI RADIALIS LONGIOR.
1. The Radial Artery before turning from the wrist.
2. The branch to the wrist and palm of the hand, called SUPERFICIALIS VOLÆ.
3. The Radial Artery where it lies under the extensor tendons

of the thumb, and where it is in its progress to the back of the wrist.*

4. The DORSALIS CARPI.
5. DORSALIS METACARPI.
6. DORSALIS POLLICIS.
7. The ARTERIA MAGNA POLLICIS.
8. The Artery continued along the Thumb.
9. The deep division of the Radial Artery, where it gives off the Anastomosing branch, which, with a branch of the Ulnar Artery, forms the deep arch of the Palm.
10. The Radialis Indicis.
11. The Smaller Artery to the fore-finger, from the A. Magna Pollicis. This is sometimes the larger branch to the fore-finger.

* To cut for the Radial Artery, when it has passed from the fore-part of the wrist, we carry the knife on the outside of the insertion of the *Extensor Primi Internodii Policis*, and the inside of the *Extensor Tertii Internodii Policis*. Betwixt these tendons the artery lies very deep, and over it the extreme branch of the *Muscular Spiral Nerve*. We find the artery passing in the notch, betwixt the os scaphoides and the trapezium. This artery tied.—*See Operative Surgery.*





Drawn by C. Bell.

Engraved by J. Smith.

Published by Longman & Co. Oct. 1st 1824.

EXPLANATION

OF

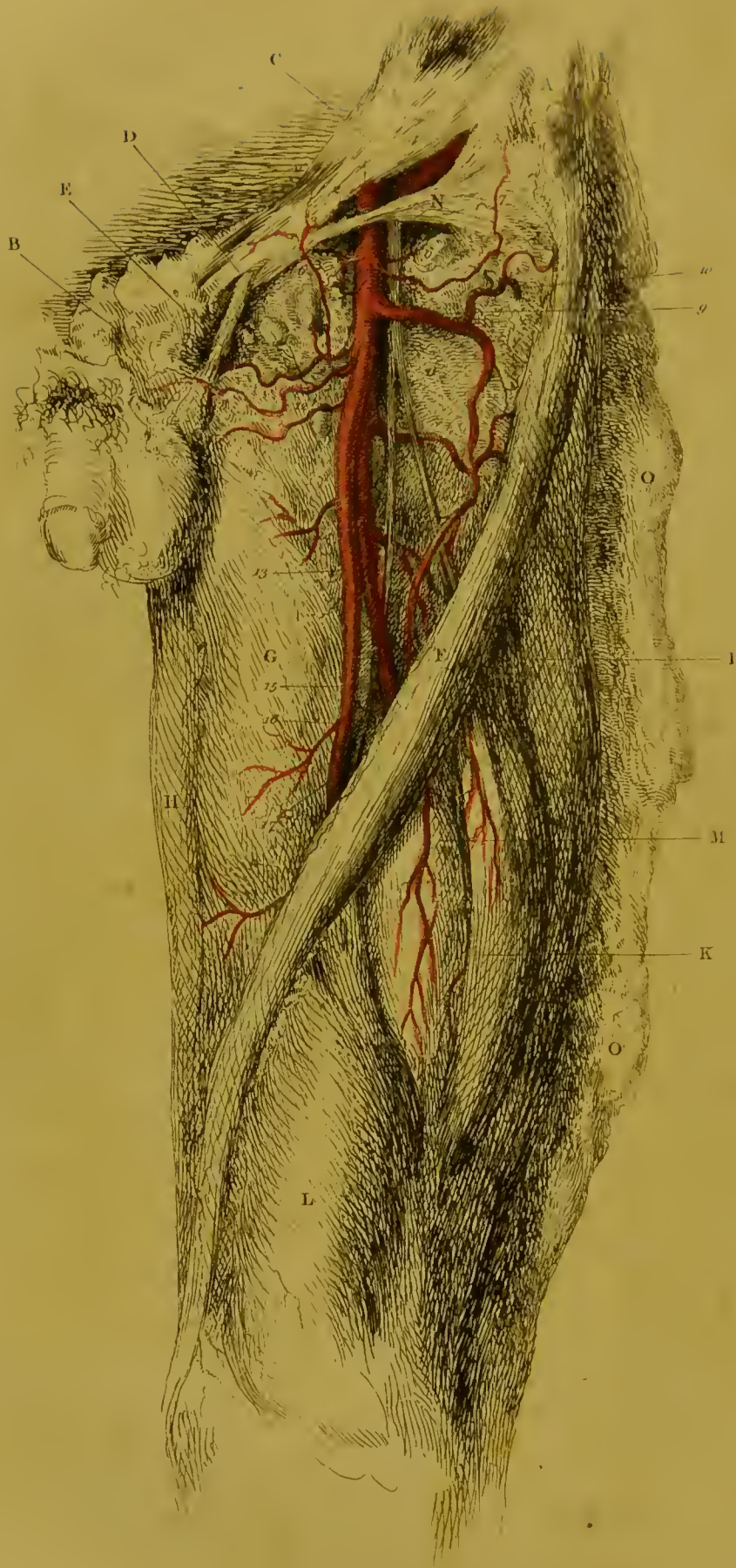
PLATE X.

THE MESENTERIC ARTERIES.

- A. A. THE OMENTUM held up, and bearing the great Arch of the Colon.
- B. The termination of the INTESTINUM ILEON in the Caput Coli.
- C. CAPUT COLI.
- D. E. The ARCH of the COLON, which stretches across the belly.
- F. The SIGMOID FLEXURE of the COLON.
- G. The RECTUM.
- H. The BLADDER of URINE.
1. The AORTA.
2. The CÆLIAC ARTERY.
3. The root of the UPPER MESENTERIC ARTERY.
4. The great Lash of Arteries which go to the small intestines.
5. The ILEO-COLIC ARTERY.
6. The RIGHT COLIC ARTERY.

7. The MIDDLE COLIC ARTERY.
8. The LOWER MESENTERIC ARTERY.
9. The LEFT COLIC ARTERY; this forming a great inoscul-
ation betwixt the Upper and Lower Mesenteric Arteries.
10. The HÆMORRHOIDAL ARTERY descending with the Rectum
into the Pelvis.
11. The EMULGENT ARTERY of the left side.
12. The SPERMATIC ARTERY.
13. The MIDDLE SACRAL ARTERY.
14. The COMMON ILIAC ARTERY.
15. The EXTERNAL ILIAC ARTERY.
16. The INTERNAL ILIAC ARTERY.





Engraved by

ARTERIES OF THE THIGH.



EXPLANATION

OF

PLATE XI.

Being a View of the Arteries of the fore Part of the Thigh.



- A. THE Upper and Anterior Spinous Process of the OS ILII.
- B. THE PUBES.
- C. THE Tendon of the EXTERNAL OBLIQUE MUSCLE of the Abdomen.
- D. THE ABDOMINAL RING, as it is called.
- E. THE SPERMATIC CORD.
- F. THE SARTORIUS MUSCLE; it is displaced a little, towards the outside.

- G. The TRICEPS ADDUCTOR FEMORIS.
- H. The GRACILIS.
- I. The VASTUS EXTERNUS.
- K. The RECTUS FEMORIS.
- L. The VASTUS INTERNUS.
- M. The CRURÆUS.
- N. The Anterior Crural Nerve. It lies on the outside of the Femoral Artery (not more superficial than the artery).
- O. O. The Integuments hanging loose.

ARTERIES.

I. ARTERIA ILIACA EXTERNA. * Its branches are :

* To see this artery the tendon of the abdominal muscles is slit. It is of consequence to observe the place of this artery : its distance from the points of bone at A and B, and the possibility of cutting through the tendon and thrusting up the Peritoneum, so as to tie it.

See a description of the manner of tying the External Iliac Artery, in my *Illustrations of the Great Operations in Surgery*.

Four cases in which the External Iliac Arteries were tied by Mr. Abernethy. — See his *Observations on Local Diseases and Aneurisms*, p. 234.

Operation of tying the External Iliac Artery for inguinal Aneurism, by Mr. Freer, of Birmingham ; and the same operation by Mr. Tomlinson. — *Freer on Aneurism*, p. 83.

External Iliac tied for a Femoral Aneurism succeeding a gun-shot wound of the thigh, by Mr. Collier. — *Med. Chir. Trans.* vol. vii. p. 136.

External Iliac Artery, tied for Inguinal Aneurism, by Mr. Soden. — *Med. Chir. Trans.* vol. vii. p. 536.

External Iliac Artery tied for Aneurism of the Femoral Artery. — See *Med. Chir. Trans.* vol. x. p. 95. Another case, p. 99.

The Femoral Artery and this Artery both tied for a deep wound from a pitch-fork, by Mr. Norman, Bath. — *Ibid.* p. 107.

Tied for Inguinal Aneurism, by Mr. Salmon. — *Med. Chir. Trans.* vol. xi. p. 398.

Tied for Aneurism of the Femoral Artery, by Dr. Wilmot. — *Dublin Hospital Reports*, vol. ii. p. 208.

2. A_a. Epigastrica*, and from this sometimes the next artery.
3. A^a. Obturatoria. †
4. A^a. Circumflexa Ilii.

Case of Inguinal and Popliteal Aneurism, both cured by tying the External Iliac Artery, by Mr. Newbigging. — *Edin. Surg. Journal*, vol. xii. p. 71.

Case of External Iliac tied by Mr. Goodlad of Bury. — *Edin. Med. and Surg. Journal*, vol. viii. p. 32.

Fine preparation of Inguinal Aneurism, in which the External Iliac had been tied. The patient died from peritoneal inflammation; and a small ulcerated point of the peritoneum was found near the ligature. The peculiarity of this preparation is there being two sacs, one contained within the other. — See *Catalogue of Windmill-Street Museum*.

* *Epigastrica*. — This artery passes in a direction towards the *Rectus Abdominis*, behind the Spermatic Cord; it is consequently behind the neck of the Sac in *Bubonocoele*. Though rarely, yet sometimes it happens, that the Hernia comes down behind the Spermatic Cord, or nearer to the Pubes, or even so as to split and separate the Vas deferens from the other Spermatic Vessels; in this case the Epigastric Artery lies on the inside of the Sac. I have seen this artery cut in the operation for Hernia. It has been opened in the operation of *Paracentesis Abdominis*, and the patient lost by a hæmorrhage into the belly.

I have found this artery ruptured by the exertion of raising a load. The blood formed a tumour which was mistaken for a ruptured bladder.

Very often a considerable branch of this artery courses along the edge of the Poupart ligament, towards the Pubes. Its common distribution is thus:

1. To the cord and cremaster muscle.
2. Towards the back of the os pubis.
3. Principal branch ascending upon the rectus.
4. Inosculating with the Internal Mammary.

For the Anatomy see *Tabul. Eustach.* xxv. No. ii. 37. *Inosculation*, tab. xxvii. xii. *Haller Fascic*, v. p. 8. *Note 2. Fascic IV.* No. 12. *Murray, Descrip. Arter. in Tabulas*, p. 89. II. *Anatomy of the Heart and Arteries*, by John Bell.

† *Obturator Artery*. — We see here what would be the situation of the *Obturator Artery*, if a Hernia should descend under Poupart's ligament in a person having this distribution of the Vessel. — See *Mr. Cooper's work on Hernia*.

5. ARTERIA CRURALIS.* Its branches are :

* *Inguinal Artery*. — Case of a wound of the Inguinal Artery. The external Iliac Artery was tied. The patient died of hæmorrhage from the original wound. — See my *Hospital Reports*, p. 284., and the *Preparation in Windmill-Street* (which shows the External Iliac secured by firm coagulum, and the inferior orifice of the wounded Inguinal Artery open).

Inguinal Artery opened in a sloughing bubo. — See *Preparation in Windmill-Street Museum*.

Case quoted from Guattani of a large Inguinal Aneurism, with his experiments to illustrate the inosculations round the hip when the Femoral Artery is obliterated. — *John Bell's Principles of Surgery*, vol. i. p. 257.

Case quoted from Petro Javina, surgeon at Rome, of a large Inguinal Aneurism which obliterated the artery. The sac and surrounding parts gangrened, and the patient lived 27 days after this, recovering gradually. Given in illustration of the inosculations of the vessels about the hip. — *Ibid.* vol. i. p. 263. Another instance of an extraordinary cure of Inguinal Aneurism, which had burst and gangrened to a great extent, quoted from Marc. Aur. Severinus, also proving the growth of inosculating vessels. — *Ibid.* p. 269.

Case of gun-shot wound high in the thigh. The artery at the groin burst after five days : its superior orifice was tied. Forty-five hours after this there occurred a fatal hæmorrhage from the lower orifice. This case is given in illustration of the free supply of blood by anastomosing vessels at the hip. *Ibid.* vol. i. p. 275.

Case of amputation high in the thigh, in which the freedom of inosculation could be observed. — See my *Hospital Reports*, p. 282.

Description of a dissection which illustrates this freedom of inosculating vessels, by Sir A. Cooper. — *Med. Chir. Trans.* vol. ii. p. 249.

Case from Wiseman of Inguinal Aneurism, which was punctured with the lancet to satisfy the surgeon of the nature of the tumour. The patient was thus nearly destroyed by hæmorrhage ; but in the end was cured. — *Principles of Surgery*, by Mr. John Bell. vol. i. p. 276.

Case of Aneurism of the Groin, with a description of the operation and manner of using the compress to obliterate the artery, from Guattani. — *Ibid.* vol. i. p. 278.

Inguinal Aneurism cured by compression. — *Med. Chir. Trans.* vol. iv. p. 26.

- 6. 6. Rami Inguinales : *epigastrica superficialis*, and to the glands, fat, and integuments.
- 7. Ramus major, or Reflexa Ilii. *
- 8. Arteriæ pudendæ, Superior media and inferior. †
- 9. Circumflexa Externa.

This artery, marked 9, coming from the Femoral Artery, belongs, in a general arrangement of the arteries, to the Profunda; but I have represented it as it was in the subject, because it is not unfrequently thus.

10. The proper external Circumflex Artery.

11. The A^a. PROFUNDA FEMORIS. ‡ It branches are

- Irregular branches.
- 12. *Circumflexa Interna*.
- 13. *Great descending internal branch*. §
Transverse or External Division, (which in this subject came off from the great femoral,) and which therefore affords the
Ramus Descendens Externus Longus.
Circumflexa Externa, and

* Any of these Inguinal Branches being cut near to their origin, may bleed a patient (already perhaps reduced, as by mercury) to death.

† The largest of these *External Pudic Arteries*, gives out its blood freely when cut in the operation of Scrotal Hernia, or Extirpation of the Testicle.

‡ *Profunda Femoris*. — For the history of this piece of anatomy, see *Mr. John Bell's Principles of Surgery*, vol. i. p. 251. et seq., and plates, p. 253. 256. ; the imperfections of *Eustachius's*, tab. xxv. xxvi. uncorrected by *Albinus*, have been the cause of the neglect of this artery.

§ *Internal branch*. — We ought to observe the course of this artery before the triceps muscle and its great size. I have known it give way in the ulceration of a gun-shot wound in the thigh. The hæmorrhagy was so great that it was conceived it must be from the superficial femoral artery, and amputation was about to be performed; but on undoing the tourniquet, the bleeding did not return. It takes the same general course, but is deeper in the thigh than the femoral artery.

14, 15, 16. Perforating Arteries. These are the branches of the division 13: there are generally four: they pass through the triceps, and appear among the hamstring muscles.

17. The Continued Femoral Artery, or ARTERIA SUPERFICIALIS FEMORIS.* Its branches are few, trifling, and

* *Superficialis*. — This artery, near the place of its perforating the triceps, is the subject of one of the most important surgical operations, the operation for popliteal aneurism. In dissection it may be well to make this experiment: Place a string so as to reach from the superior spine of the os Ilii to the prominent part of the inner Condyle, mark the middle of the string, make an incision a very little towards the inside of it, in the direction of the string; first you come to the Sartorius Muscle, next laying that aside, to a fascia, which stretches from the *triceps* to the *vastus internus*; when this is slit up, you may see the artery: — observe its situation in regard to the vein, the *nervus longus*, and the *sheath* which surrounds it.

For a description of the manner of performing the operation of tying the Femoral Artery, see the *Illustrations of the great Operations of Surgery*.

Case of a wound of the Femoral Artery from scissors; the artery tied above and below the puncture, by Mr. Burchall of Manchester, 1757: this is the first case on record of the Femoral Artery being tied in this country. — *Med. Obs. and Inq.*, vol. iii. p. 106.

A stricture of the Femoral Artery above the place where it gives off the Profunda, by Dr. Baillie. — *Trans. of a Society for the Improvement of Med. and Surg. Knowledge*, vol. i. p. 131.

For an account of Mr. Hunter's first operation in which he cut upon the fore part of the thigh for Popliteal Aneurism, with four other cases in which Mr. Hunter operated; also cases by Mr. Lynn, Mr. Cline, Mr. Pott, and Mr. Earle. — See a *Paper by Sir Ev. Home*, in the *Trans. of a Society*, &c. vol. i. p. 138. See Observations on Mr. Cline's Operation, in *Mr. John Bell's Principles of Surgery*, vol. i. p. 228. Observations on the Account given of Mr. Pott's Case, *ibid.* p. 232. Criticisms on the Mode of operating used in these Cases, *ibid.* p. 383.

Case of Aneurism of the Femoral Artery, and operation above the Aneurism, by Mr. Birch. — Vol. i. of *Trans. of a Society*, &c. p. 166.

Five cases of Aneurisms of the Popliteal Artery, operated upon according to the manner recommended by Mr. Hunter. — See a *Paper by Sir E. Home*, *Trans. of a Society*, vol. ii. p. 235. See *John Bell's Principles of Surgery*, vol. i. p. 235.

irregular, to the parts it passes. The trunk lies betwixt the tendons of the *triceps* G. and the *vastus internus* L., and inclines backward and inward, until it perforates the tendon of the Triceps Muscle. The SUPERFICIAL FEMORAL ARTERY has three branches.

Case of a patient having a large Aneurism of the ham, which burst with great hæmorrhage. He had two Aneurisms in the Femoral Artery of the opposite leg. They all got well under pressure. — *Paper by Mr. Wilson, in Trans. of a Society, &c. vol. ii. p. 268.*

Case of a lady, with Femoral Aneurism operated upon a little above the tumour. — *Surg. Observ. by Mr. Abernethy, p. 299.*

Two cases of Femoral Aneurisms: the Femoral Artery in both tied above the tumour. Case of Popliteal Aneurism and operation. — *Ramsden on Sclerocele and on Aneurism, p. 318.*

Case of Femoral Aneurism, by Deschamps. The artery was tied below the tumour, after a great mangling of the parts, and being obliged to cut across the sartorius muscle. — See *Scarpa on Aneurism, translated by Wishart, p. 319.*

Two cases of Femoral and Popliteal Aneurism, in which Mr. Hunter's principle and his manner of operating were used. — See *Scarpa on Aneurism, translated by Wishart, p. 298.*

Case, by Mr. Forster, of Femoral Aneurism, and operation. — *Med. Facts and Observ., vol. vi. p. 115.*

Two cases of Femoral Aneurism: one following a wound by a knife. — *Scarpa on Aneurism, translated by Wishart, p. 421.*

Case of Aneurism produced by rupture of the Femoral Artery during exertion. — *Mr. John Bell's Principles of Surgery, vol. i. p. 317.*

Gun-shot wound of the thigh, with laceration of the main artery of the thigh: the case related by Severinus. — *Ibid. vol. i. p. 397.*

Case in which the Femoral Artery was torn in a gun-shot wound and tied. — See my *Hospital Reports, p. 280.*

Wound of the Femoral Artery by a knife. — See *Mr. John and Charles Bell's Anatomy of the Human Body, and Principles of Surgery, vol. i. p. 223.*

The Femoral Artery wounded by scissors. — Quoted from *Deschamps, Principles of Surgery, vol. i. p. 390.*

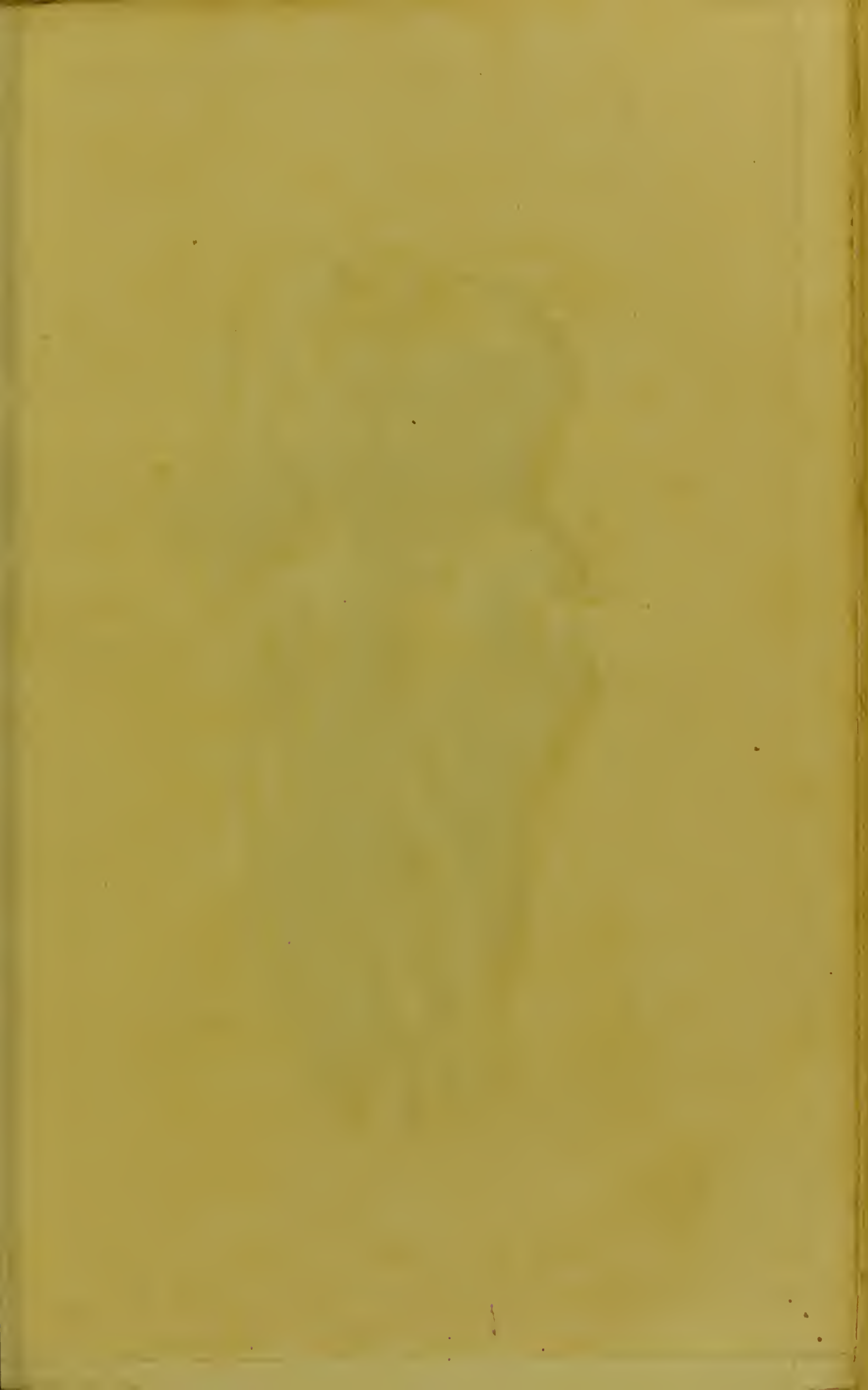
Femoral Artery wounded by a chisel. The surgeon made a new incision to come more directly on the wound of the artery, but he could not discover where the bleeding proceeded from. — *Mr. John Bell's Principles of Surgery, vol. i. p. 436.*

Preparation from the stump of a thigh. The saphenus longus nerve is tied with the main artery. — See *Catalogue of Museum, Windmill-Street.*

Irregular Branches to the neighbouring parts.

Rs. Anastamolicus Magnus. This is the first considerable branch which the Femoral Artery gives off; viz. while concealed in the tendon of the triceps. After the artery has dipped from the fore part of the thigh, but has not yet emerged behind, or become popliteal, it gives off branches which are improperly called perforantes. I enumerate these under the term, —

Irregular Popliteal Branches, to the hamstring muscles and their tendons.





ARTERIES OF THE HIP AND HAM.

EXPLANATION

OF

PLATE XII.

Representing the Dissection of the Hip and back part of the Thigh.

- A. THE Os Sacrum.
- B. The Os Coccygis.
- C. The Os Ilii.
- D. The Tuber Ischii.
- E. The Inferior Sacro-ischiatic Ligament.
- F. The Trochanter Major.

E

- G. The Rectum.
- H. The Bladder of Urine.
- I. The Prostate Gland.
- K. The Bulb of the Urethra.
- L. The Crura Penis.

MUSCLES.

- M. The GLUTEUS MAXIMUS.
- N. The GLUTEUS MEDIUS.
- O. The GLUTEUS MINIMUS.
- P. The BICEPS FLEXOR CRURIS.
- Q. The SEMI-MEMBRANOSUS.
- R. R. The TRICEPS FEMORIS.
- S. The GRACILIS.
- T. The VASTUS EXTERNUS.
- W. The SACRO-ISCHIATIC NERVE.

ARTERIES.

- 1. ARTERIA GLUTEA.* It is seen here coming out from un-

* *Gluteal Artery.* — In case of a wound of this artery, and the consequent formation of a false Aneurism, the surgeon, after puncturing the tumour, has to push his finger deep amongst the blood until he arrive at the trunk, as it turns over the notch of the Ilium. — Compressing it there he may gain time. For this reason I wish to point my readers' attention to the place where the trunk turns over the bone.

For a case of Aneurism of the Gluteal Artery, the Internal Iliac Artery was tied by Mr. Stevens, see *Med. Chir. Trans.* vol. v. p. 422. An extraordinary and unexampled operation.

Case, by Theden, of a patient dying from Hæmorrhage from a wounded Gluteal Artery.

An Aneurism from a wound of this artery, in consequence of a man sitting down with large shears in his pocket, which ran into his hip. The artery was tied and the man cured. — *Discourses on Wounds, by Mr. John Bell.*

A similar case by Professor Jeffray, where the patient died by the bursting of the tumour. — See *Principles of Surgery*, vol. i. p. 424.

Case of Aneurism of this artery in consequence of the artery being burst by a fall. — See my *Hosp. Rep.* and *Museum*.

der the Sacro-ischiatic notch, above the Pyriform muscle ;
and it immediately divides into these branches :

- a. Muscular branches within the pelvis and at its exit.
- b. R^s. Superficialis : viz. under the gluteus maximus.
- c. R^s. Ascendens : viz. under the gluteus medius.
- d. R^s. Transversus : viz. under the gluteus medius, and passing forward.

2. ARTERIA ISCHIATICA.*

- Within the pelvis, and in its passage out, this artery branches to the bladder, rectum, and neighbouring muscles : on the back of the pelvis, to the glutei, to the great nerve, to the lesser muscles of the thigh bone, in many profuse branches.*

3. ARTERIA PUDICA COMMUNIS†, where it is seen on the back of the Pelvis. It enters again under the Ischiatic liga-

* *The Ischiatic Artery* being equally liable to accident with the Gluteal Artery, it may be well to look to the subject after the following description of its place.

To hit upon the ischiatic artery as it comes out from the pelvis, begin the incision by the side of the sacrum, three fingers' breadth from the posterior spinous process of the ilium, and carry it down in the length of the fibres of the gluteus maximus, to the outside of the tuberosity of the ischium. Even in a thin man, the artery lies two inches deep. Now, pushing in the finger as if under the sacrum, we there feel the acute edge of the sacro-sciatic ligament ; on the lower margin of the sacro-sciatic hole, (which is distinctly felt with the finger amongst the looser parts,) the artery is felt crossing the ligament obliquely ; near it, upon its outer side, are some lesser nerves ; the great sciatic nerve is removed an inch from it.

† *The Pudic Artery*. — The branch which is seen in the Plate to cross the Perineum, is necessarily cut in the operation of *lithotomy*. Often, I may

ment. Before it has passed out of the Pelvis, it gives off (in the female, the uterina,) vesicales mediæ, hæmorrhoidales mediæ, vesicales imæ; while between the ligaments to the small muscles.

4. The PUDICA COMMUNIS*, where it enters again into the Pelvis, and lies on the inside of the Os Ischii. Here the artery divides into these branches:

{ Hæmorrhoea Externa.
Perinea Superficialis.
Transversalis Perinei.
Profunda Penis.

from which last comes off

{ The Superficialis Penis.
The Artery of the Bulb.
The deep Artery of the Cavernous
Substance.

5. Is the artery entering the Bulb of the spongy body of the Urethra.
6. A branch of the ARTERIA CIRCUMFLEXA INTERNA, inosculating with the Gluteal Artery.†
7. A branch of the OBTURATORIA. It inosculates with the Ischiatic Artery.
8. A large perforating Artery, a branch of the Profunda.

venture to say, the principal artery, where it lies close on the bone, is cut in this operation. — See *Operative Surgery*, vol. i. Where the *Artery of the Bulb* enters (at 5), I am pretty certain that it has been opened by the caustic, in a case of Stricture, since I have been consulted by a patient, after repeated Hæmorrhage, for three weeks after the caustic had been applied. See my *Work on the Diseases of the Urethra*.

* After Amputation of the Penis the whole surface was included within two ligatures before the Hæmorrhage could be stopped. — See *White's Cases in Surgery*, p. 162.

† Betwixt the branches of Arteries, 2, 6, 7, 8, 9, there are free inosculations which preserve the limb alive, though the main artery be tied on the fore part of the thigh or in the groin. See some observations on the course of circulation when the main artery is tied, *Operative Surgery*, vol. ii.

9. Another large perforating Artery — from the Profunda.
10. A third perforating Artery.
11. ARTERIA POPLITEA* or main artery of the limb after coming through the tendon of the Triceps muscle.

* *Arteria Poplitea*, wounded by a sabre. — *Principles of Surgery*, vol. i. p. 328. Wounded by the sharp projection of the femur after fracture. — *Operative Surgery*, vol. i. 357.

Description by Walther of the dissection of a Popliteal Aneurism, showing that it was produced by injury to the coats of the vessel. — *Mr. John Bell's Principles of Surgery*, vol. i. p. 315.

Preparation showing the structure and progress of growth in a small Popliteal Aneurism. — *Catalogue of Museum, Windmill-Street*.

Case of a large Aneurism, extending from the ham to near the groin, related by Guattani. — See *Mr. John Bell's Principles of Surgery*, vol. i. p. 321.

Case by Warner of the sudden growth of a Popliteal Aneurism, to show that the artery may be lacerated by exertion. — *Ibid.* p. 325.

Case of Popliteal Aneurism, extending nearly to the groin, and mistaken. Amputation performed. Another mistaken case of burst artery. — *Ibid.* p. 347.

Case of Popliteal Aneurism, produced by a fractured thigh-bone united irregularly. — *Ibid.* p. 330. 368.

Popliteal Artery, wounded by a projection of bone. The Femoral Artery was tied as for a common Popliteal Aneurism, according to Mr. Hunter's method. The operation did not prevent the growth of the tumour, and the thigh-bone was amputated. There is a preparation of diastasis of the lower epiphysis of the thigh-bone clumsily united which produced a similar accident. The same operation was resorted to, and amputation was also performed. — See *Preparations in my Museum in Windmill-Street*, and *Catalogue*.

Description, by Sir A. Cooper, of the arteries of a limb in which the Femoral Artery had been tied, seven years before, for Popliteal Aneurism. — *Med. Chir. Trans.* vol. ii. p. 249.

Preparation of the arteries of the thigh injected, and the branches preserved, to show the freedom with which the inosculating vessels supply the main trunk below after it has been tied for Popliteal Aneurism. Another dried preparation, illustrating the same thing. — See *Catalogue of Windmill-Street Museum*.

Dissection, by M. Boyer, of a leg, in which the superficial Femoral Artery had been tied for Popliteal Aneurism. — See *Scarpa on Aneurism*, translated by Wishart, p. 250.

Case of Popliteal Aneurism, which Guattani cured by compression and spare regimen. Another case. — *Mr. John Bell's Principles of Surgery*, vol. i. p. 360.

Cases from Guattani and Deschamps, illustrating the difficulties and dangers of the old manner of operating for Popliteal Aneurism. — See *Scarpa on Aneurism, translated by Wishart*, p. 239. 457.

Aneurisms of both Popliteal Arteries of a man: both Femoral Arteries were tied after a short interval, and the man was cured, by Mr. Norman, Bath. — *Med. Chir. Trans.* vol. x. p. 116.

Case of Popliteal Aneurism, which was mistaken for a fleshy tumour, and the leg amputated. — *Ibid.* vol. viii. p. 496.

Case of Popliteal Aneurism and operation. — *Ibid.* vol. ix. p. 409.

Case of Popliteal Aneurism. — *Ibid.* vol. xi. p. 100.

Case of Aneurism of the Popliteal Artery and operation, by Mr. C. Hutchinson. — *His Surg. Observ.* p. 102.

Case of Popliteal Aneurism: an instance of Deschamps's method of operating. — *Mr. John Bell's Principles of Surgery*, vol. i. p. 392.

Case from M. Mursinna of an operation for Popliteal Aneurism. — See *Scarpa on Aneurism, translated by Wishart*, p. 483.

Four cases related of Popliteal Aneurism, operated on after the manner of Mr. Hunter, by Scarpa. — See his *Work on Aneurisms, translated by Wishart*, p. 404.

Case of gun-shot wound of the Popliteal Artery. Hæmorrhage took place from the lower orifice of the wound. The thigh had to be amputated: on dissection the superior orifice of the artery was found filled with coagulum and obliterated: the lower orifice almost open. — *New Med. and Phys. Journal*, vol. iv. p. 177.





EXPLANATION

OF

PLATE XIII.

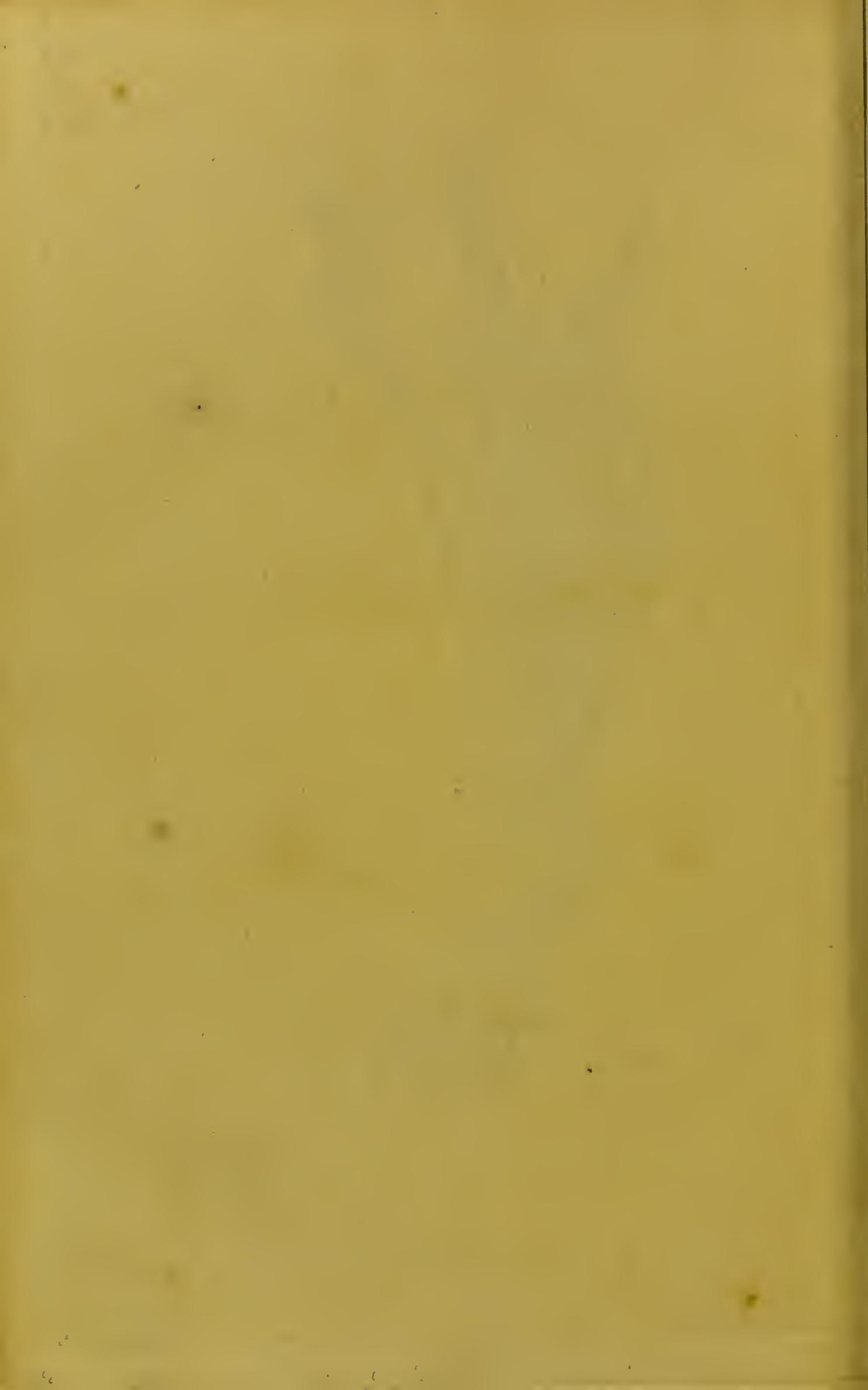
ARTERIES OF THE LEG.

MUSCLES, &c.

- A. THE VASTUS INTERNUS.
- B. THE VASTUS EXTERNUS. Betwixt these two muscles is the tendon of the RECTUS FEMORIS.
- C. THE PATELLA or knee-pan, on each side of which are seen the CONDYLES of the FEMUR.
- D. THE BICEPS FLEXOR CRURIS.
- E. THE LIGAMENT of the PATELLA.
- F. THE HEAD of the TIBIA.
- G. THE GASTROCNEMIUS.
- H. THE SOLEUS.
- I. THE TIBIALIS ANTICUS.
- K. THE PERONEUS LONGUS.







EXPLANATION

OF

PLATE XIV.

*This Plate exhibits the Arteries on the back part of the Leg and
Sole of the Foot.*

- A. THE inside of the Knee.
- B. THE TIBIA.
- C. THE Heel, or OS CALCIS.
- D. THE TENDO ACHILLIS, being the tendon of the following muscles, viz.
- E. F. THE GASTROCNEMIUS MUSCLE.
- G. THE SOLEUS MUSCLE.
- H. FLEXOR LONGUS POLLICIS.
- I. TENDON of the TIBIALIS POSTICUS.
- K. SHORT FLEXORS of the TOES.

ARTERIES.

- 1. The Popliteal Artery.

2. The branches of the Popliteal Artery, called *Surales*. They go to the heads of the Gastrocnemius Muscle.

N. B. The Articular Arteries are concealed here. They are five in number ; two *Superior Articular Arteries*, internal and external, which encircle the joint, two *Inferior Articular Arteries*, also internal and external, which encircle the lower part of the joint, and one which is irregularly distributed to the back of the knee joint, named *Articularis Media*.

3. *Anterior Tibial Artery*.

4. The division of the artery into the Posterior Tibial and Fibular arteries.

5. The *Fibular Artery*.*

6. The *Posterior Tibial Artery*.†

* To cut for the *Fibular Artery*.

“ To find this artery, two hands’ breadth from the heel, cut betwixt the Gastrocnemius and the Peroneus Longus, *i. e.* on the outside of the Gastrocnemius where it is becoming tendinous ; turn up the edge of the tendon ; you then find the Flexor Pollicis covered with its sheath. If you seek for the Fibular Artery by going deep in the leg without piercing this fascia, or sheath, you find the Tibial Nerve, and may come on the Tibial Artery. To find the Fibular, then, we cut down by the side of the bone (Fibula) and raise the fibrous origins of the Flexor Pollicis. We then find the artery by the acute edge of the bone lying on the Interosseous Ligaments, accompanied only by its *venæ comites*.”

Case of Aneurism of the Fibular Artery, from being wounded in a fracture of the leg. The tumour was opened, and the man died from bleeding. — *John Bell’s Principles of Surgery*, vol. i. p. 337.

Description of an operation of tying the Fibular Artery, by Mr. Guthrie. — *Med. Chir. Trans.* vol. vii. p. 536.

† To take up the *Posterior Tibial Artery*.

“ For complicated wounds in the sole of the foot, this artery may require to be taken up behind the Ankle Joint, and before it pierces under the Abductor Pollicis Pedis. We shall be directed to the exact place by observing the lowest projecting part of the Tibia. The tendons which run close upon this tuberosity of the bone, are the Tibialis Posticus, and Flexor Communis ; the first lies so closely braced to the bone in its articular sheath, that it will not be observed ; the artery runs a little nearer the heel than the tendon of the Flexor Communis, a fascia braces down

7. *Calcanea*, a branch of the Posterior Tibial Artery to the heel.
8. The division of the *Posterior Tibial Artery*, into the Plan-
tar Arteries.
9. The *Internal Plantar Artery* branches to the flexor ten-
dons and to the abductor and flexor pollicis. Three pro-
fundæ; exterior, media, interior. Ramus externus.
10. The *External Plantar Artery*. Transversus anastomoticus,
profundæ, digitales quartæ, interosseæ profundæ, ana-
stomotica, viz. with the anterior tibial artery.
11. The division of the last to the toes.

" the artery, and the nerve is under the Artery." — *Operative Surgery*, vol. ii.
p. 337, 338.

Case of gun-shot wound of the Posterior Tibial. The patient died from
the bleeding from its inferior orifice. — *John Bell's Principles of Surgery*,
vol. i. p. 445.

Wound of the Posterior Tibial Artery by a pick-axe. Two inches of the
Fibula were cut off, according to the proposal of Mr. Gooch, in order to
expose the artery. — *Hey's Surgery*, p. 39.

Preparation of a Posterior Tibial Artery divided. The patient died from
Hæmorrhage ten days after the wound. — See *Catalogue of the Museum*,
Windmill Street.

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